SPECIAL AWARDS ISSUE 2023

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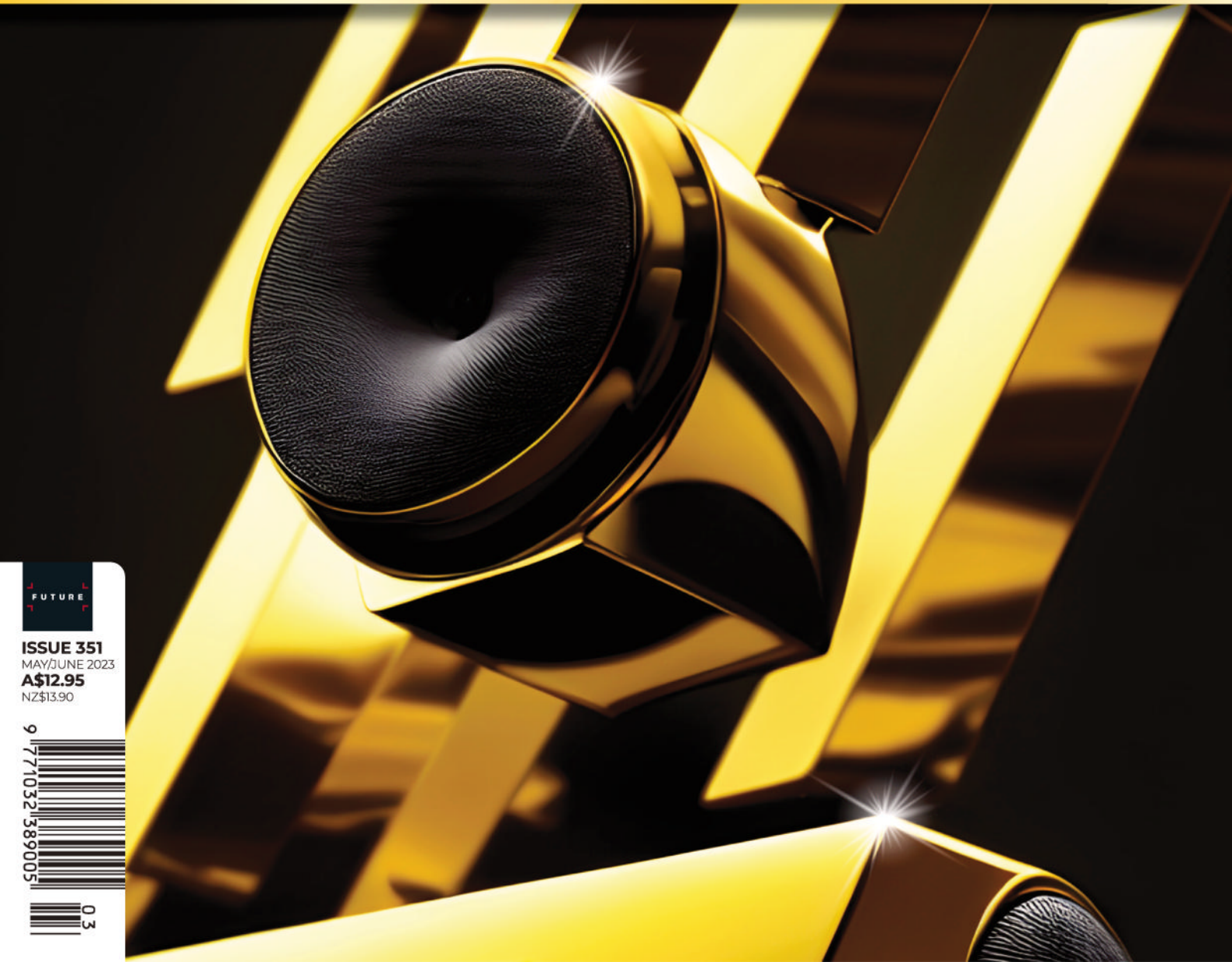

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MAY/JUNE 2023
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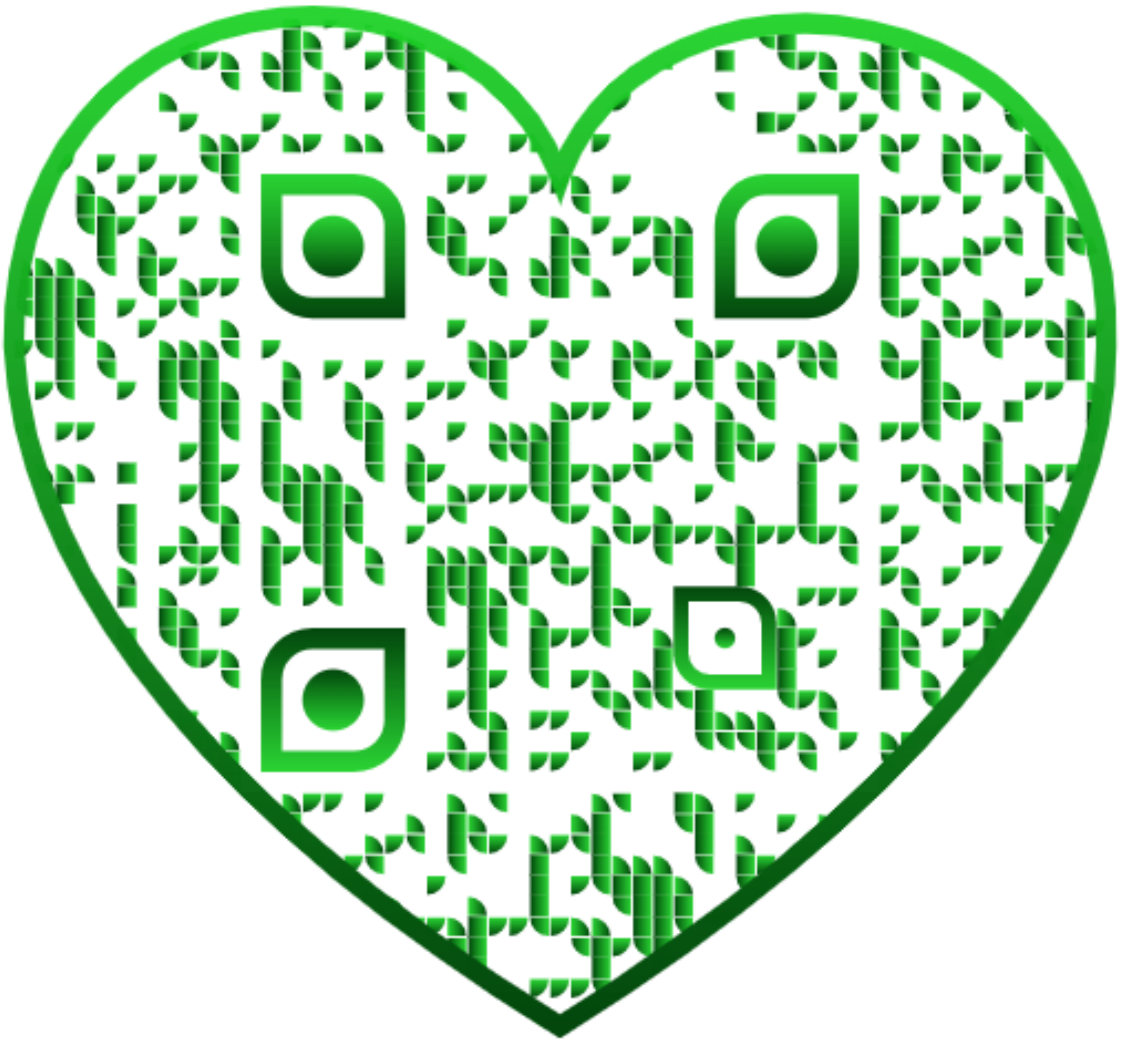

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contents

SOUND+IMAGE

ISSUE #351
MAY-JUNE 2023
SPECIAL AWARDS ISSUE

20 SOUND +IMAGE AWARDS 2023

The winners start here...

28 VINYL!

Five winning turntables and our phono stage of the year.

39 CONTROL & POWER

Our winners from entry-level amplifiers right up to to high-end pre-power combos.

89 ULTRA-WIDEBAND, SCL6 & MORE

Could UWB replace Bluetooth? And what is going on with MQA?

2023 SOUND+IMAGE AWARDS

MUSIC SOURCES

CD Player of the Year	22
Streaming Music Player under $5000	24
Streaming Music Player over $5000	25
DAC of the Year	26
Turntable of the Year under $500	28
Turntable of the Year $500-$1000	29
Turntable of the Year $1000-$2000	30
Turntable of the Year $2000-$10,000	32
Turntable of the Year over $10,000	34
Phono Stage of the Year	36

AMPLIFIERS

Amplifier of the Year under $2000	39
Amplifier of the Year $2000-$4000	40
Amplifier of the Year $4000-$8000	41
Amplifier of the Year $8000-$12,000	42
Amplifier of the Year over $12,000	44
Pre-Power Amplifiers of the Year	46
Stereo Power Amplifier of the Year	48

SYSTEMS & LOUDSPEAKERS

Music System of the Year under $1000	51
Music System of the Year over $1000	52
Wireless Speakers of the Year under $2500	53
Wireless Speakers of the Year over $2500	54
Standmounters of the Year under $5000	56
Standmounters of the Year over $5000	63
Floorstanders of the Year under $5000	64
Floorstanders of the Year $5000-$10,000	65
Floorstanders of the Year over $10,000	66
Editor's Choice Award	68

MORE AWARDS OVERLEAF >>>

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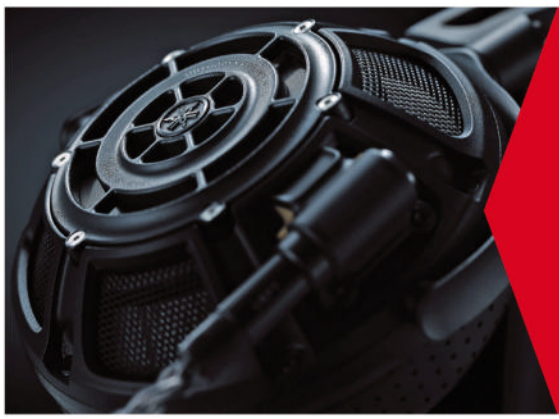
DIGITAL MAGAZINES

contents 2

62 WINNING AV KIT!
Everything you need for bigscreen movie magnificence.

78 CUSTOM!
Let the experts in, and your home cinema could look like our winners...



83 HEADPHONE AWARDS
For home or away, here's all our award-winning headgear for 2023.

96 MUSIC REVIEWS
TICKING AWAY THE MOMENTS...
Floyd's 'Dark Side' gets a new box set and Atmos mix.

SOUND+IMAGE

AUDIO-VISUAL AWARDS

Subwoofer of the Year under $5000 62
Subwoofer of the Year over $5000 63
AV Receiver of the Year 64
AV Processor/Preamp of the Year 65
Soundbar of the Year under $500 66
Soundbar of the Year $500-$1000 67
Soundbar of the Year $1000-$2000 68
Soundbar of the Year over $2000 69
Soundbar System of the Year 70
Soundbar Technical Achievement Award 71
Surround System of the Year 72

AV Projector of the Year under $2500 73
AV Projector of the Year $2500-$5000 74
AV Projector of the Year over $5000 75
Television of the Year under $2000 76
Television of the Year over $2000 77

CUSTOM INSTALLATION AWARDS

Cinema 'GOLD' Awards 78-81
Installation Speakers of the Year 84

HEADPHONE AWARDS

Home Headphones of the Year <$5000 83
Home Headphones of the Year over $5000 84
Wireless Headphones of the Year (no ANC) 85
Wireless Headphones of the Year <$1000 86
Wireless Headphones of the Year >$1000 87

LIFETIME ACHIEVEMENT AWARD
98

features & regulars

NEWS
9-14
- KEF's R Series goes Meta
- Has MQA had its day? (see also p89)
- Buds from B&W, Denon/nura, JBL and Yamaha
- New streaming kit from dCS and NAD
- Apple Music Classical & the AirPlay bottleneck
- JBL's incredibly brave soundbar launch
- Will xMEMS silicon speakers change the world?

retailer recommendation
DEALER SYSTEM
16
The Tivoli Hi-Fi team in Melbourne selects a streaming system with some classic brands.

tech brief
UWB, SCL6 & MORE
89
As MQA enters administration, we check out new tech that may take us beyond Bluetooth quality.

music & movies
MUSIC REVIEWS
94
New music from established names: The Damned, Metallica, Tim Finn, even Shaking Stevens, plus reissues and expanded sets from Pink Floyd, the Kinks, and Carter The Unstoppable Sex Machine...

The new, the old, and the best of the best

At last, our Awards issue is published. Our regular readers will know that this usually comes out just before Christmas, but the world is not the same as it was before, and all manner of things conspired to persuade us to give it a few extra months. The Australian Hi-Fi Show at the end of April was a key consideration, but also we knew that a great many products over the last couple of years have been delayed by component shortages and the cumulative distractions of the epidemic. Products only make it into our Awards if we've had them in for review, so a few extra months of testing would ensure we caught all possible candidates, to be sure of bringing you our usual 'Best of the Best' collection.

It didn't really work, of course, because the hi-fi and AV consumer market is a constantly rolling sushi train of new product chugging around the conveyor belts (or handmade by artisans, in the case of some higher-echelon winners). There's no perfect time to stop and assess; there's always something new and exciting around the corner. Just as we finished what we expected to be our final assessments, we started receiving new wonders as part of our EISA duties — *Sound+Image* and *Australian Hi-Fi* are, proudly, Australia's only EISA member magazines and we vote into their awards. And a few of those last-minute arrivals proved to be such stunners that we had to rejig our lists all over again to include them here.

Some of our winners, then, are sparklingly up to date. But some are significantly older. Two are previous winners which have returned to prove themselves against all new comers, which is a reminder that we should not only celebrate the new, when it's possible that the best is already in the market. That's when our full Sound+Image Buying Guide (back next issue) comes in handy, as it lists all still-available award winners, both past and present.

The ageing process for hi-fi and AV is most rapid at the cutting edge, of course, in products which face potentially changing standards and technologies, such as streaming music players and wireless speakers. The more something resembles a computer, the shorter its useful lifespan is likely to be. Computers have shaved our expectations in that regard alarmingly. Before the computer era, you might expect your TV to last a decade and your hi-fi to last a lifetime. Now we buy a computer every two or three years, a TV every four years. And we stick the old ones in other rooms. The Australian Government's annual TV consumer survey published last month and showed that in 2022 the most common reason for buying a new TV was to upgrade or keep up with new technology, and that 17% of Australian homes now have three TVs and 7% have four. Mind you it also showed that increasing numbers of youngsters don't want a TV at all, because they watch everything on phones and tablets. I'm sure they'll learn about true cinematic impact as they grow older, settle down, and then need something to drown out their own children.

One nice result from the Australian survey was that streaming TV services are not as dominant as is generally thought. Yes 66% of the survey respondents were now accessing subscription services (dominantly but no longer quite so dominantly Netflix). But overall, 87% of TV use was still free-to-air TV, and that's not including catch-up for free-to-air channels.

Something similar was realised in the UK recently, where the government was last year considering a sell-off of Channel 4, largely because it was assumed the days of terrestrial broadcast were all but over. But nobody knew for sure, because Netflix has never published viewing figures. That changed late last year, when Netflix introduced an ad-supported subscription tier, and of course its advertisers wanted to know how many people were watching.

The big reveal came in November last year, and showed Netflix's biggest show that week in the UK to be *The Watcher*, which got half a million viewers on its first day. Channel 4 was quick to point out that even the 20th-ranking show for that same day on terrestrial TV managed 1.3 million viewers, a Channel 4 show *Nnamdi's Story: Stand Up to Cancer*, while the top show was also Channel 4, getting 4.3 million viewers for the inevitable *The Great British Bake Off*. Two months later the UK Government declared Channel 4 "a British success story"; it remains in public hands.

Of course people will keep watching *The Watcher*, and the cumulative audience for Netflix's vast raft of shows would have scored far more in total. But as the Australian survey also shows, our free-to-air services are still getting a lot of love.

In hi-fi and AV equipment too, the traditional is thriving alongside the cutting edge. Vinyl continues to overtake CD in every known metric, even as streaming music becomes an increasingly essential service for many of us. Everything is increasingly connected; multiroom music and smart homes are getting ever easier to achieve with our TVs and tablets as control devices.

Whatever your preferred pathway to entertainment, our Awards should bring you at least a recommendation, if not a burning desire to get along to a dealer and try something out. We always recommend listening and purchasing via a bricks-and-mortar store, where you can get further advice and pointers as to a full system which will work together and suit your needs.

Music and movies can spirit us away from the more intense trials of life, and enhance the good times. I hope our Awards issue makes everything just that little bit better; it's certainly a summary of all the joy we've had playing with this kit for the last year and a bit. Please enjoy!

Cheers,
Jez Ford,
Editor, Sound+Image

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The Hi-Fi Headlines

LEN WALLIS AUDIO®

NEWSLETTER NO.264

Recent arrivals at Len Wallis Audio:

Most of the action during the last month revolved around speakers, with some awe-inspiring new models hitting our floor.

We now have the Sonus Faber Serafino G2 speakers on demonstration. This is a brand that continues to attract new followers and with good reason. In terms of performance, Sonus Faber is one of the finest loudspeaker brands available and is undoubtedly one of the best-looking. Strangely not many companies can get that combination right. The Serafino G2 sell for $42,995 a pair.

Another company that appears to do no wrong is the French speaker brand Revival Audio. It would be an understatement to say that their initial offerings – the Atalante 3 and 5 – were a hit. When they announced they were releasing a lower-priced, more contemporary-looking series, we held our breaths, wondering if the initial release was to be a one-hit-wonder. We need not have worried. While most of our listening so far has been to the $3,200 floor-standing Sprint 4, it is evident that they have again struck gold. No loudspeaker will suit everyone's taste or every type of music, but for the money, the Sprint 4 is an exceptional offering, and you should ensure it is on your audition list.

The other exciting news on the speaker front is Bowers & Wilkins have again announced a trade-in deal on their 700 and 800 Series speakers, where you are guaranteed a minimum of 15% trade-in for your working speakers. A pair of 801 D4s amounts to over $8,600 – certainly, a great enticement if you were contemplating a move up from a pair of older speakers. This promotion runs until the end of June.

We have an exceptional offer on the Linn Majik LP12 turntable running through to the end of May. Purchase a Majik LP12 and receive a free Trampoline Base and a free upgrade to the Koil moving coil cartridge, a saving of $1,095. The Majik LP12 is the turntable and is the benchmark at its price point ($6,995) – this offer makes it an even better value.

And an unexpected bonus:

NAD has released a commemorative amplifier – the C3050 - to mark their 50TH anniversary. The styling of the C3050 is based on the C3030, a 1970's classic, with its retro facia and timber sleeve – but that is where the similarity ends. This is an amplifier built for modern times. It is rated at 100 watts/channel and features a high-performance DAC, BluOS streaming, Dirac Live room correction, Apple AirPlay2 and Wi-Fi. It has a high-quality phono stage, HDMI eARC input, subwoofer out and Bluetooth aptX HD connectivity – including the ability to stream to a pair of Bluetooth wireless headphones. NAD has made every effort to cater to all needs with this unit.

This is a very limited release, with only 1972 units (marking their foundation year) being released worldwide. Our original allocation had sold well before we received stock – but we have secured a further – very small – shipment. This will be your last chance to pick up a future collector's piece—$ 3,295.

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KEF
R Series Meta

Five years after its last refresh, KEF has updated its R Series speaker range with various improvements, led by the company's performance-enhancing MAT (Metamaterial Absorption Technology).

The seven-strong range sits in the middle of KEF's line-up, between the Q and Reference series. The latter was given the MAT treatment just over a year ago alongside the Blade, following the debut of the technology in the LS50 Meta and LS50 Wireless II in 2020, so it was somewhat inevitable that a refreshed R Series would also feature it. Essentially the circular 'Westworld' maze-like structure of the MAT disc sits behind the tweeter, with KEF claiming the disc's multiple channels of different sizes together absorb '99%' of unwanted rear radiation from the dome.

That tweeter is part of a new Uni-Q driver for the R Series, rising to the 12th generation, along with varying numbers of bass drivers with rather cool-looking hybrid aluminium bass drivers, all benefitting from an enhanced new crossover design and fine-tuned signal path. The microfibre grilles each have 1801 precision-cut holes, says KEF, claiming that performance is thereby ensured even when the drivers are covered. The overall promise is a significant step forward over the previous-generation in terms of sonic transparency.

The R3 Meta (left) is the series' only standmounter, with three floorstanding models (R11, R7 and R5 Meta), two centre speakers (R6 and R2 Meta), and a Dolby Atmos-compatible R8 Meta surround module that can be wall-mounted or placed atop another speaker. The R Series doesn't have its own subwoofers, but KEF has plenty elsewhere in its ranges. The full range is available in black or white gloss, or walnut. The pictured versions are special editions, the R3 Meta in 'Indigo Gloss' (left) and and R7 Meta in 'Titanium Gloss' (above).

More information: ***au.kef.com***

PRICE LIST
KEF R Meta Series

R11 Meta:	$11,500/pr
R7 Meta:	$8500/pr
R5 Meta:	$7000/pr
R3 Meta:	$3900/pr
R6 Meta centre:	$3500 each
R2 Meta centre:	$2500 each
R8 Meta Atmos:	$2800/pr

Has MQA had its day?

We've been querying the need for MQA for years now: why use clever-but-opaque compression for high-res audio when we have the bandwidth to stream it uncompressed? Two pieces of news point to significant change: Tidal's CEO Jesse Dorogusker has announced that while existing MQA tracks will remain available on Tidal, the company is moving to larger high-res FLAC files for HiFi Plus subscribers, with the ability to dial quality up or down depending on reception.

Second is MQA Ltd announcing it is entering into administration (comparable to Chapter 11 in the US), saying its main financial backer, Reinet Investments S.C.A., has withdrawn; it is continuing to trade, even though its last financial report described MQA as a "loss-making start-up". But MQA Ltd also describes the move as "restructuring", saying: "Following the recent positive reception to MQA's latest technology (SCL6), there has been increased international interest in buying MQA Ltd." But is SCL6 really so special? See p89 for more.

Intimate ear-wear: NEW BUDS BLOOMING

JBL Tour PRO 2 gets smart

JBL has beaten Apple to market with the idea of a smart charging case: one has arrived with its new **$329.95 Tour Pro 2** true wireless earbuds. Instead of reaching for your phone and its control app, an LED touch display built into the case can manage music and control/receive calls, messages and social media notifications. Meanwhile the buds themselves use four microphones for noise-cancelling and an app-based Ear Canal Test to maximise its effect, while call-making utilises the full six mikes for JBL's 'crystal call' algorithm in which you can tweak the level of your own voice. There's JBL's version of Spatial Sound, with up to 40 hours of battery charge available including the case (32 hours with ANC). More info: ***www.jbl.com.au***

Denon adds Australia's nura tech

It seemed a surprise — 100-year-old global brand Denon is teaming up with a far more recent Aussie success story, taking the otoacoustic emission measuring technology developed by Melbourne's Nura into its own earbuds, with the first fruits of the partnership expected mid-2023. But the acquisition of the technology makes more sense at a higher level — Denon is owned by Sound United, which is owned by Masimo, a company which was firmly focused on medical technologies until it acquired such an expansive raft of consumer audio brands.

For Masimo the addition of personalised audio tech makes sense; it is developing a **Masimo Adaptive Acoustic Technology** (AAT) platform leveraging its own "30-year expertise in signal processing" together with engineering from Sound United, and now the Nura technology as well, with the goal of individual sound profiling. It's the first time we've heard from Masimo direct, the press release about Nura being headed 'Masimo Consumer' (we note also that the Boston Acoustics brand has curiously dropped off its masthead). More news on this as it develops.

Bowers & Wilkins' Pi Gen 2

Updates for B&W's premium wireless buds, with a new **Pi7 S2** at $649, and the **Pi5 S2** for $499. Both look similar to their predecessors, the higher model using two-way double drivers and aptX Adaptive Bluetooth, while the Pi5 S2 has a single driver and the lesser aptX Bluetooth codec. They also tackle perceived issues with drop-outs in the original models, using a new design of antenna repositioned within the earbud endcaps, plus a new endcap material more transparent to Bluetooth signals. ***bowerswilkins.com/en-au***

Yamaha True Sound E3C in six colours

Yamaha's latest third-generation True Wireless earbud comes in at only $129, yet offer facilities more commonly found on higher buds, the new **TW-E3C** including an Ambient mode, a low-latency Gaming mode, and Multipoint connection to two different Bluetooth devices. Yamaha's Headphone Control App includes custom EQ to tweak the sound, in addition to the company's 'Listening Care' intelligent equalisation which aims to reduce the need for high volumes by delivering a full-range sound at lower listening levels. There are six colours available here, with a charging case to match that will assist in a total of 24 hours battery life. More info: ***au.yamaha.com***

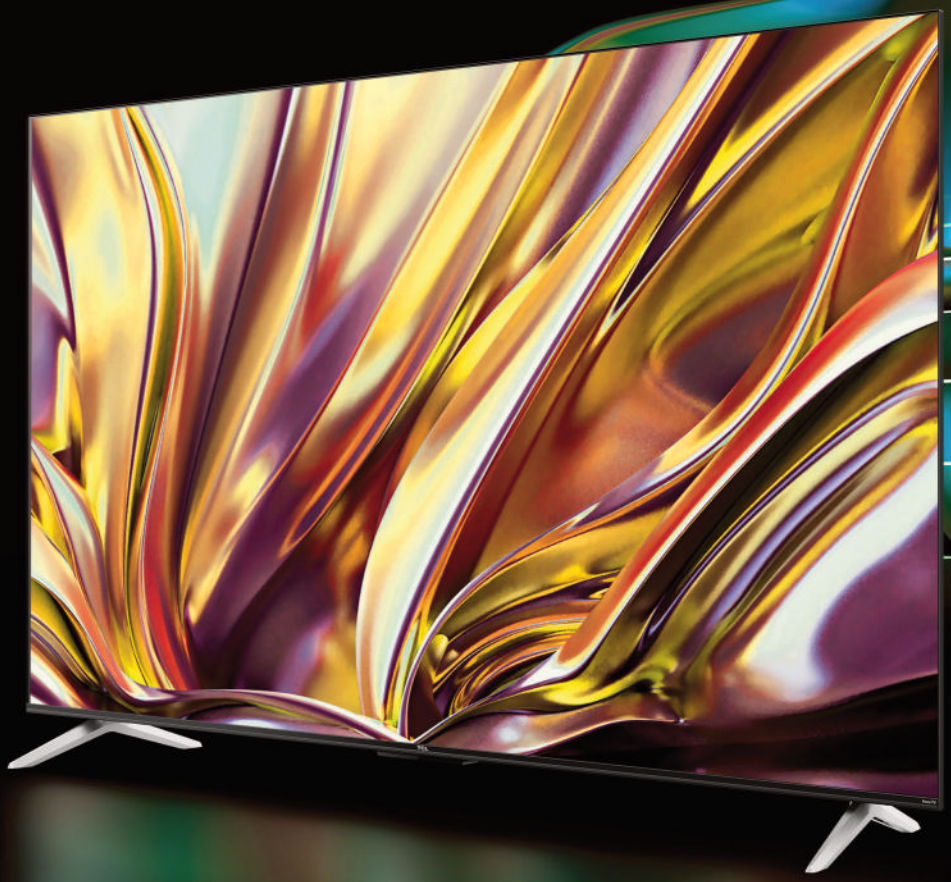
TCL

WINNER 2023 SOUND + IMAGE AWARDS

TV OF THE YEAR UNDER $2000

SMART TV MADE SIMPLE

Meet TCL's award-winning RP630 Roku TV with smarts, speed – and a price you just won't believe.



TCL • Roku TV

TCL RP630 4K UHD Roku TV

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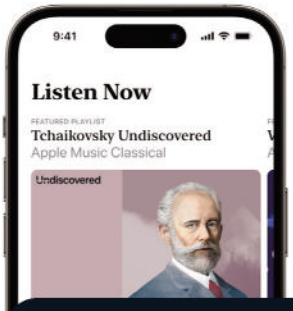
Big stream: dCS Bartók Apex



You'll find the CD-equipped dCS Rossini Apex in our awards this year (p22); the company also has a new streamer in the dCS Bartók Apex. It works with the excellent dCS Mosaic Control app to access Tidal, Qobuz, Deezer and internet radio, while also having AirPlay 2, Spotify Connect and UPnP, and being Roon Ready. Technically the main news is that it includes dCS's latest Ring DAC Apex technology, introduced on Vivaldi and Rossini products last year; it also gains some of the electronics straight from its higher-end brethren, such as the clocking architecture and digital processing for the Ring DAC Apex platform. As with all dCS components, the Bartók Apex is designed and hand-assembled in Cambridge, England. It comes in two variants: the straight Bartók Apex DAC for $29,995, or the Bartók Apex DAC with Headphone Amplifier for $34,995. More info: ***www.advanceaudio.com.au***

Apple Music Classical & the AirPlay 2 bottleneck

We're enjoying Apple's new Music Classical app, free to those on an Apple Music subscription and simplifying searches by composer, conductor and other classical-type fields. And also Apple promotes that *"Apple Music Classical features lossless audio of up to 24 bit/192kHz throughout the service so listeners can experience the nuances of every performance."*

And that's great. But how can you hear it? The Music Classical app is currently iPhone-sized only, so works only on iPhone and iPad. You can set your device to receive high-res, but you can't play it through wireless headphones, because Bluetooth can't play high-res (see p89).

What about AirPlay 2, to stream it across to an AirPlay 2-equipped hi-fi? We'd thought this would yield at least CD quality, since AirPlay 2 is capable to 24-bit/48kHz, but it seems this isn't so. We discovered from a Bluesound engineer that Apple devices will drop any lossless or high-res stream to AAC 256k for AirPlay 2. Apple's own devices (e.g. HomePod 2) may be able to pick up a lossless or high-res stream direct, but other AirPlay gear will get the compressed AAC stream. Apple has confirmed to us that lossless listening can only be achieved via a wired connection to headphones, receivers or powered speakers (or via the iPhone/iPad's own speakers!). To enjoy anything above 48kHz, you'd need an external DAC running from your iPhone or iPad's Lightning or USB-C connection.

This would seem to apply to the normal Apple Music on Apple devices too, but the desktop, browser and AppleTV versions get around that. Currently Apple says the Classical version "was built exclusively for mobile". We're hoping at least an AppleTV version will follow.

Little stream: NAD CS1

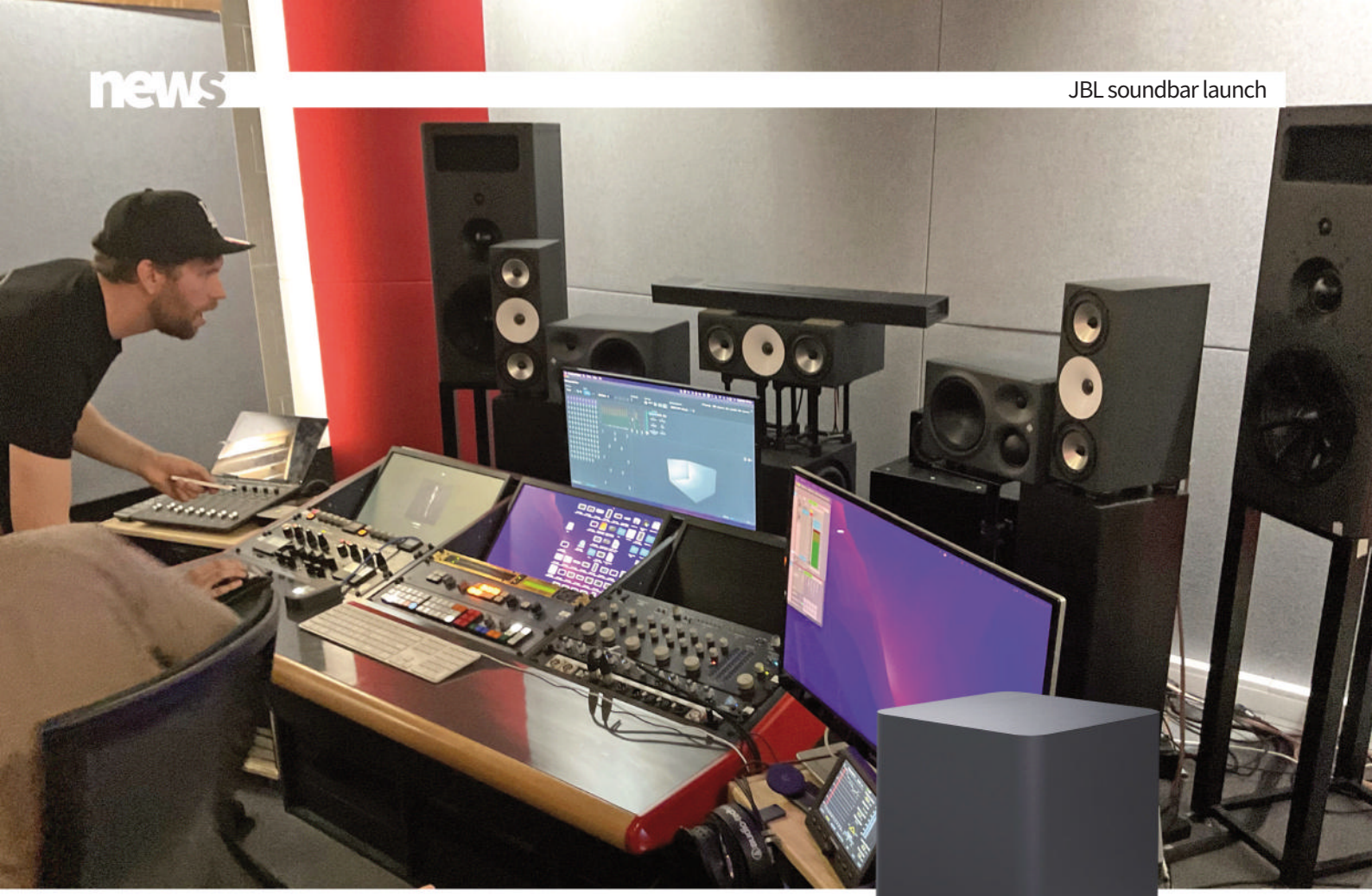
Should your existing system not merit the level and price-tag of the dCS above, NAD has a rather more affordable new model for your consideration — the $599 CS1 Network Streamer. Despite the affordable price NAD is promising "audiophile-grade streaming" from a digital stage based on Texas Instruments' PCM5141 DAC, a design NAD says is "known for its extremely low noise, excellent dynamic performance, and immunity to clock jitter".

Of course, NAD itself and its Lenbrook sister companies have many streamers and streaming amplifiers that are based on the BluOS multiroom streaming platform. You don't get that here: the CS1 is purely an 'endpoint' streamer, meaning it's designed to work with common third-party streaming protocols such as GoogleCast, AirPlay 2, Spotify Connect and Tidal Connect, once networked by either Wi-Fi or Ethernet. This enables users to carry on using their native music service apps of choice and simply point them at the NAD streamer, rather than beginning again with a dedicated product app.

The low price doesn't preclude DLNA support, which here allows playback of networked music files up to 24-bit/192kHz and can also render MQA files/streams (though see *News* p9). Roon is supported for subscribers to its popular library management platform, and Bluetooth is also onboard for non-networked streaming.

The CS1 has RCA outputs for stereo amplifiers or powered speakers, as well as optical and coaxial outputs to allow an external DAC or amplifier to upgrade its conversion, if superior.

More info on all things NAD now from ***www.ambertech.com.au***

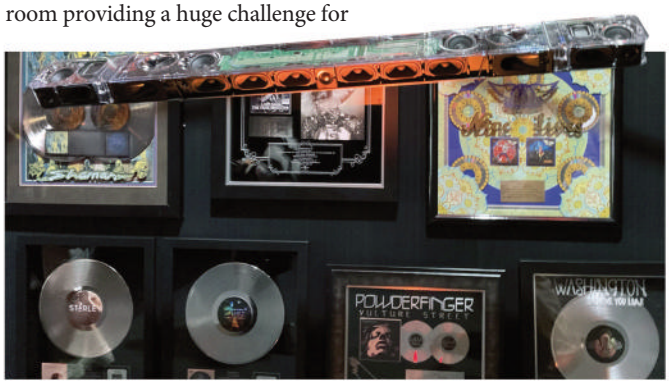


Bar flies

You'll find our opinion of **JBL's new Bar 1300** within our awards pages: (p70); it comes with a huge subwoofer and detachable wireless rears which assist the $1999 range-topper to achieve an impressive and powerful sense of immersion with Dolby Atmos material, both movie soundtracks and Atmos-mixed music.

What we want to tell you about here is the Sydney launch of the full soundbar range by the Australian Harman team — because the launch was one of the bravest stunts we've seen in 30 years of audio reporting. The venue was Sydney's Studios 301, chosen by Harman not only for its connections with so many great recordings but because it now has a full Atmos-mastering suite, pictured above. Harman is further involved with the studio, including funding a scholarship with Studios 301 to the UK's Abbey Road Institute, a training ground for the next generation of music producers and sound engineers.

So Harman arranged demos of its new bar range in several areas of the studio complex, including the large Studio 1, a thoroughly damped room providing a huge challenge for audio performance, as demonstrator Amrit Lall took pains to note. The Bar 1300 in that room was cranked to the max, with baffles constructed either side of the demo area to allow side-firing drivers to create immersion. Despite the limitations, the Atmos demo was impressive, although the bar curiously displayed 'Dolby Surround' rather than the 'Dolby Atmos' it should show when fed proper Atmos.



▲ JBL's Bar 1300 at the Sydney launch, in a cutaway version with drivers exposed, and the bar suspended above some Studios 301 silverware.

But that was just for starters. We next moved into the Atmos mastering suite, where Harman had positioned the centre section of the JBL Bar 1300 atop the system's centre speaker (you can see it in the picture above), while the separated wireless rears were perched on the system's own standmount rears. Studios 301's Atmos engineer then proceeded to A-B switch between the JBL soundbar system and the full $200k studio Atmos mastering system!

This might be considered an insane way to demonstrate a soundbar, as there is clearly no hope it is going to win. But instead Harman scored something of a coup. Yes of course there was absolutely no chance of confusing one with the other — the full Atmos system was vastly more powerful and spacious and accurate. But the surprise was how well the Bar 1300 did manage: it was not a sad crushing of the Atmos music being played; things remained powerful and musical. We've since had the Bar 1300 into our testing rooms for a full work-out and it is quite the wowser with Atmos music — not to be compared with a full surround system (there's always JBL Synthesis for that), but highly impressive for a soundbar system.

Plus serious kudos to Harman for pulling off the bravest launch demo we've ever seen. More info: ***www.advanceaudio.com.au***

Silicon speakers: the future of audio?

California-based xMEMS is shouting from the rooftops that it's got a new technology that will radically change the world of loudspeaker technology and design for the first time since Oliver Lodge developed the first experimental moving-coil loudspeaker in 1898.

"*MEMS speakers, which are only now just beginning to hit the market, will soon replace literally all existing speakers, across all consumer audio products*," was the message from a breathless PR agent in New York. "*With this new silicon micro-speaker, the audio quality and comfort that's currently only available in $1000+ audiophile headphones can now be experienced in mass-market devices priced for the mainstream.*"

We treat such claims with enormous caution, naturally. Much the same was said about NXT flat panel speakers in the 1990s, which were to be lining our cars and planes by now, cancelling noise while delivering delicious audio. But nah, never happened.

There is, however, an interesting precedent here. The little speakers are already working and available in hearing aids; a higher-res version was delivered in 2022 for in-ear buds and smart wearables, and now xMEMS has what it calls an high-sensitivity solid-state MEMS speaker for high-res audiophile-grade in-ear use.

Also, the idea of a coil-less transducer has worked just fine in reverse, on MEMS microphones. These use capacitance behind a flexible membrane to detect sound: as the membrane moves, the capacitance between the moving membrane and a fixed backplate changes with the distance between them, and this change in electrical response can be converted to an audio output.

The advantage of this is primarily its simplicity, with almost no moving parts, which translates to cost savings. By 2007, MEMS designs had captured 5% of the global microphone market. By last year, according to xMEMS, that share has risen above 80%. IMARC estimated the global market value for MEMS microphones in 2022 to be US$1.8bn.

What works for microphones generally works in reverse for speakers. So could we be facing a MEMS speaker revolution?

Printing speakers

That large circular thing at the top of the page is a silicon wafer made at TSMC (Taiwan Silicon) for xMEMS. It includes more than 2000 of the company's latest 'Cowell' silicon speakers (shown individually in the circle above right). xMEMS' modules are 'True MEMS', because as opposed to earlier hybrid-MEMS speakers they implement the entire speaker (actuator and membrane) in silicon. A thin-film piezo is the speaker actuator, replacing both coil and magnet, with silicon itself as the speaker diaphragm instead of plastic or paper. This means they be produced on a wafer rapidly, uniformly, and cost-effectively — at scale. The Cowell claims to be the world's smallest solid-state micro speaker, about a tenth the weight and less than half the size of a comparable coil speaker, and with no moving parts. They are intended for in-ears and hearing aids, and the Cowell is already starting mass production.

Too small to rock'n'roll?

And yet we note that the two-way module being made in Korea by Bujeon using the xMEMS tweeter combines it with a conventional 9mm driver. From this we conclude that xMEMS's Cowell presumably can't do bass at either sufficient level or quality.

The xMEMS representative replied: *"For TWS earbuds w/ANC (such as AirPods Pro, Galaxy Buds, etc.), which are leaky and require driving high SPL (up to 140dB SPL) for low-frequency noise cancellation, xMEMS cannot offer this level of low frequency output, so pairing with a dynamic driver makes sense. For non-ANC buds that are typically fully occluded (no leak), all xMEMS drivers can be used as full-range."*

One to watch in the bud space, then, even if we don't expect to see metre-high versions arriving to replace "*literally all existing speakers*" any time soon (or, well, ever).

See more information: ***xmems.com***

3D news: Sony Pro releases no-glasses 27-incher

Consumer TV manufacturers have all given up on 3D TV — the hot new thing just a decade ago, but now relegated to a shelf of unplayable 3D Blu-rays. But there remain solid markets for 3D visualisation, from technical design to that great white elephant that is the Metaverse. Sony hasn't given up on the idea of a glasses-free 3D display; it has been releasing Spatial Reality Displays for a couple of years, and the ELF-SR2 is the largest yet, promising 27 inches of glasses-free highly realistic three-dimensional content in 4K. It appears to use some sort of foveated rendering, requiring facial tracking to sense where a viewer's eyes are positioned and looking. It should sell at around US$5000. Sadly 3D Blu-ray movies are not on the list of compatible file-types; this is very much a Sony Pro product.

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$24k streaming system

We ask a top hi-fi shop to recommend a top hi-fi system.

THE CHALLENGE

In our series of retailer recommendations, we ask a hi-fi dealer to recommend a hi-fi system. It can be a vinyl-based system, a disc-, file- or streaming-based system, or an all-rounder. The dealer can pick the price-point.

This is, of course, unusual freedom for them. A good hi-fi dealer will ask about your musical preferences, your home, the way you listen, as well as budget, so that they can help you find the perfect hi-fi for the job. But here they have free rein to pick something that's been impressing themselves.

This issue we turn to Tivoli Hi-Fi in Melbourne's Hawthorn East, where the team has chosen a streaming system that comes in under $24k including connecting cables. It features some absolutely iconic products.

"We have long been fans of MartinLogan electrostatics, and the ESL X is a brilliant speaker," says Tivoli Hi-Fi's James Tranchina. "They just sound 'right' — wonderfully neutral, and with pace and dynamics. The McIntosh provides the drive to get the very best out of the speakers, and the Auralic Altair G1.1 will serve all your streaming and network-based music needs."

James Tranchina is joined by Philippe Luder and Burak Sunter to give us the details of a combo the Tivoli team has named... the '*Feel the E(SL)-Motion streaming system*'.

McIntosh MA252 $8495

HYBRID STEREO INTEGRATED AMPLIFIER

- Valve preamplifier; solid-state power amplifier
- 100W into 8Ω; 160W into 4Ω (20Hz-20kHz, 0.03% THD)
- Inputs: mm phono, 2 x RCA unbalanced, 1 x XLR balanced
- Dimensions (hwd): 31 x 19 x 42cm
- Weight: 12.7kg

We reckon this is the most tempting system yet in our series of retailer recommendations — some legendary names in a trio which salutes the classics via the glowing valves of the McIntosh amplification and the unique joys of electrostatic-panel sound from none other than MartinLogan, but then bringing the system entirely up to date with a high-class streamer from Auralic, putting the system under app control, allowing your favourite streaming service to play at high quality into the waiting amplifier.

For simplicity we ask the dealers to submit a single-source system, but the additional inputs on the McIntosh MA252 here make expansion easy — including an excellent phono input should you wish to hear what the amp and electrostatics sound like in an all-analogue configuration.

PHILIPPE SAYS...

"Still made in upstate New York where McIntosh have been plying their trade since the 1950s. While you can see the nods to history in the outward aesthetic of this amplifier, under the hood is a modern classic. With a gutsy 100wpc pushing to 160wpc into 4 ohms, it can effortlessly control most loudspeakers. Add to that a valve front-end to give it that extra breathy and emotive quality, and this amplifier is a winner."

TIVOLI HI-FI

Music Lovers With A Purpose

"At its heart, Tivoli Hi-Fi is run and operated by music and movie lovers," the team tells us. "We listen to music, buy music, stream music, and go to live music gigs — we understand music lovers as we are music lovers! We love all music no matter the genre. Our passion is to help our customers put together the system of their dreams (and their means). We understand that for some this isn't a sprint and may involve gradually piecing a system together over an extended period of time. Whatever your needs, we are here to help every step of the way." Website: **tivolihifi.com.au**

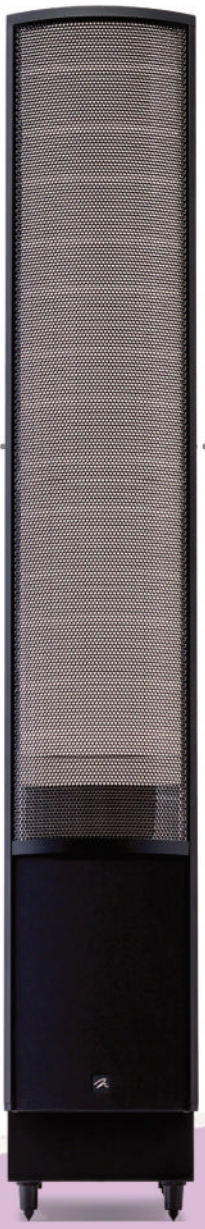
Auralic Altair G1.1 Streamer $4995

DIGITAL AUDIO STREAMER

- Inputs: optical, coaxial, USB-A, ActiveUSB, AES/EBU, Ethernet/Wi-Fi, UPnP, AirPlay 2, Roon, Bluetooth
- Outputs: balanced, unbalanced, headphone
- Dimensions: 34 x 32 x 8cm

BURAK SAYS...

"Such a versatile and amazing-sounding streamer — it caters for everything, it has a fantastic app called Lightning DS to control the back-end interface for all user preferences, and there's native control for Qobuz and Tidal (MQA), as well as Spotify Connect, AirPlay and Bluetooth. This little wonder can also have an SSD mounted internally for music storage and CD ripping. The care, attention to detail and build quality is stunning. What's not to love!



"Feel the E(SL)-Motion" streaming system

Streamer: $4995
Amplifier: $8495
Speakers: $8495
Cables: $675 + $1135

TOTAL SYSTEM PRICE: $23,795

MartinLogan ElectroMotion ESL X

$8495 / pair

HYBRID ELECTROSTATIC LOUDSPEAKERS

- 102 x 22cm XStat CLS electrostatic transducer; 2 x 203mm (8-inch) high excursion paper cones
- Sensitivity: 91dB (2.83V@ 1m)
- Impedance: 6Ω (1.6Ω @ 20kHz)
- Crossover frequency: 400Hz
- Dimensions (hwd): 150 x 24 x 53cm
- Weight: 23.6kg each

JAMES SAYS...

"Once you hear a pair of electrostatic speakers, it can very hard to go back to more conventional transducers. The sense of air and space is intoxicating. The downside is needing to be on axis with them to get their very best — however we would argue these encourage you to sit and engage with the music and get lost in it. And in the end, this is our aim with all our clients, to have them emotionally connected to the music they love like never before.

"While the ESL X are small in comparison to the larger models in MartinLogan's range, these do not feel distilled or small. They breathe and energise the room.

"For cables we have selected matching interconnects (1m balanced Music Link) and speaker cables (3m pair of Music Wave Bi-Wire) from **Transparent Audio**, one of the most highly respected cable manufacturers today. Our experience is they help to get the very best out of the equipment they connect."

ALL TOGETHER NOW

"This system gets to the heart of music," says Tivoli Hi-Fi's James Tranchina. "It will take you on a journey every time you listen to it. It's simple to use for all your streaming needs with the Auralic Lightning DS App, or if you use Roon, it is a Roon endpoint. It just works. The Auralic will be able to see music stored on your existing network, or can have an SSD installed if you want to store music directly on it. You can even rip your CDs if you have the drive installed!

"With the McIntosh MA252 the inputs can be named and switched on or off, meaning no extra cycling to get to the one you want. Of course if you wish to add a turntable, the MA252 has a mighty fine-sounding moving-magnet phono stage to serve your analogue needs.

"This system will be the endgame for some, for others a step in their journey — it may give you the taste for more, or it could be exactly what you're looking for."

WHEN DETAIL MAT

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www.studioconnections.com.au

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Tullamarine VIC 3043
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www.visualfidelity.com

2023 SOUND+IMAGE AWARDS

Meet the 'Wow' listers

For 34 years, since 1989, the Sound+Image Awards have been celebrating the very best in audio and AV, recognising the products which have wowed us over the previous 12 months of our magazines *Sound+Image*, *Australian Hi-Fi*, *Best Buys Audio & AV*, and *Audio Esoterica*, and which represent our recommendations of the very best products available in Australia today in every category from teeny-tiny true wireless buds up to unliftably large amplification.

Unusually we haven't held our Awards-night shindig prior to the magazine going to print; it is due to take place at the end of April, amid the wonders of the Australian Hi-Fi Show, and we're not sure yet whether our set designs (as shown on the mock-up images here) will be accepted or scaled back to something less extravagant, depending on budget.

But what we do know is that the list of winners contains some magnificent examples of hi-fi and AV: everything you need to enjoy the very best in music and movies, headphones, custom installation. These are the products currently available that have made us sit up and go 'wow'. It's the 'Wow' list. My congratulations to all the winners, and my thanks to their designers and manufacturers for bringing us the goods to deliver so much joy.

And stay with us — the next 12 months look like having some radical developments in hi-fi. So you don't miss anything, may I recommend a subscription? (see p93). Cheers!

Jez Ford, Editor

AND THE WINNERS ARE...

THE ROLL OF HONOUR: Alphabetical Index of the 2023 Awards

Adcom GFA-555se	48	Merging+PLAYER+POWER	25
Andersons AVI	79	Musical Fidelity M6x Vinyl	36
Anthem AVM 90	65	Musical Fidelity MX-DAC	26
Audio-Technica M20xBT	86	Music Hall Classic	29
Audio-Technica Sound Burger	28	NAD C 700	40
BenQ X3000i	74	Paradigm Founder 40B	56
Bowers & Wilkins 804 D4	60	Perreaux 200iX	42
Bowers & Wilkins Panorama 3	68	Polk MagniFi Mini AX	67
Cambridge Audio Alva ST	30	Polk Signature Elite S60	58
Cambridge Audio MXN10	24	Pro-Ject X2 B + Phono Box S3 B	32
dCS Rossini Apex CD	25	PSB Speakers Alpha iQ	54
Denon PMA-900HNE	39	Revival Audio Atalante 3	61
Elac Vela FS 407	50	Rogue Home Cinema	81
Epson EH-LS12000B	75	Ruark R2 Mk4	51
Epson EH-TW6250	73	Samsung HW-S800B S Series	71
Focal Bathys	87	Samsung QN95B Neo QLED	77
Grado RS1x	83	Sennheiser Ambeo Max	69
Hifi Hunter	80	Sonus faber Omnia	52
Holbo MkII Airbearing	34	Sony HT-A9	72
JBL Bar 1300	70	Sony WH-1000XM5	86
KEF LSX II	53	SVS 3000 Micro	16
Magico ASUB	63	TCL RP630	76
Marantz Cinema 60	64	Theory Audio Design sb25	82
March Audio Sointuva WG	48	Yamaha R-N2000A	41
Mark Levinson No. 5805	44	Yamaha SR-C30A	66
McIntosh C12000 / MC3500 MkII	46	Yamaha YH-5000SE	84

This year our Awards ceremony is taking place after this Special Awards Issue goes to print, so the pictures here are mock-ups, courtesy of our favoured AI artist, Stable Diffusion.

dCS
Rossini Apex CD Player/Streamer

Of all our awards, why begin with CD? And why a player which weighs in at nearly 20kg and will lighten your wallet to the tune of $49,995?

It is true that CD sales are on the wane. Yet that's brought CD prices to their lowest ever, new and secondhand, so now is the perfect time to load up on the silver and make sure you have a machine that will deliver those laser-etched bits to the best possible quality.

Besides, as the name makes clear, this player is all set up for the new as well as the old — it is a streamer as well as a CD player, playing from online music services such as Tidal, Qobuz, Spotify and Deezer, from files locally stored on a NAS drive, or streamed from Apple devices via AirPlay. It comes with a control app as well as a giant remote control.

It is Roon Ready, so those paying for that fine software can enjoy its endless musical rabbit holes and sleeve notes.

The Rossini Apex is also a digital preamp and DAC, offering USB-B, USB-A, optical, coaxial, BNC and AES/EBU digital inputs. It can play up to 24-bit/384kHz, DSD128, MQA too. And with volume control available via a variable output, you could easily connect the dCS player directly to a power amplifier.

So this is a full digital player, preamp and DAC, designed and assembled in the UK to last a lifetime. But it's not only what it does, it's how the dCS technology within then treats the digital input which makes this player all the more remarkable. Rather than using a third-party DAC chip, or even a conventional 'ladder' DAC to convert digital signals into analogue, the Rossini Apex uses an unusual DAC design known as a 'Ring' DAC. For a full explanation of this we'd point you to the in-depth stuff on the dCS website, but basically it overcomes a problem of ladder DACs where slight variations in resistor values cause inevitable permanent inaccuracies in conversion. By using 48 different current sources instead of one, and by switching them randomly during the conversion process using Field Programmable Gate Arrays, dCS aims to average out any errors from resistor values, leading to smoother and more cohesive sound quality. (The 'Apex' part of the product name indicates the latest version of this 'Ring DAC'.)

The Rossini Apex certainly proved itself in our listening — it's simply a stunning-sounding component. The presentation of the soundstage was totally clean, crisp and stable with thrilling localisation of instruments. It goes a step above, so that we could hear dynamic nuances that are just not revealed by most digital components — or, we must say, by many analogue components either!

Looking for the last CD player you'll ever buy, plus a world-leading streamer/DAC? Here you go. ***www.advanceaudio.com.au***

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

This high-end CD player from the UK is all set up for the new as well as the old – a full digital player, streamer and preamplifier at the highest levels of technology.

audio-technica

FROM THE STUDIO, TO THE STREET,
NO COMPROMISE.

Harnessing the legendary M-series studio sound, the new **ATH-M50xBT2** and **ATH-M20xBT** combine updated features and functionality with a classic design to set the new standard in wireless audio.

Bluetooth®

ATH-M50xBT2

- App-Based Equaliser
- 50hr Battery
- Beam Forming Technology

ATH-M20xBT

- Lightweight Design
- 60 Hour Battery
- Wired Connection Capable

WINNER 2022 SOUND IMAGE AWARDS

WINNER 2023 SOUND IMAGE AWARDS

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STREAMING MUSIC PLAYER OF THE YEAR UNDER $1000

Cambridge Audio MXN10

WINNER 2023 SOUND IMAGE AWARDS

If you have an existing audio system that you love, but which doesn't include the smarts for playing from online music services or streaming from your phone, then what you need is a standalone streaming music player. Connect it to your hi-fi, and you can enter the modern world of app-controlled music streaming.

As with any kind of hi-fi component, you can go high-end (see opposite), or hunt the best-priced bargain that's suitable for your level of system. Whatever the price, the key contributors to pleasure will be the quality of the digital circuits and the DAC within, but almost equally important, the interface through which you'll be accessing music. We've had plenty of technically brilliant streamers through our doors which have suffered by apps that just ruin the experience.

Cambridge Audio is blessed with an excellent interface: StreamMagic, which is used as the front-end of the company's highest smartest preamplifiers, yet also features here, in this $899 MXN10 network player. This is a half-width unit which follows the design of Cambridge's Alva phono stages and DacMagic DACs, so that you get almost no visual feedback on what's going on — just a power button that's alight whether it's on or off, and four little preset studs which can call up a favourite internet radio station or playlist.

But you'll get all the visual feedback you need from the attractive StreamMagic app, which we particularly like for the way you customise it to remove services you're not using. There is built-in Spotify Connect, Tidal and Qobuz (subscriptions required for best quality), and the MXN10 is Roon Ready for that subscription software. The internet radio implemention includes MPEG-DASH support for higher quality streams where available (notably BBC stations).

For local streaming there's also Bluetooth, AirPlay 2, and Chromecast all available.

There's even a USB-A slot for a stick or drive of files; it navigated our hard drive of high-res music impeccably, proving capable up to an astonishing 32-bit/768kHz for PCM, and up to DSD512, with the MXN10's Gen 4 StreamMagic module backed by an ESS Sabre DAC (the ES9033Q) and output circuits to deliver a high level of hi-fi performance that will serve systems up to many times this unit's price. (You could also upgrade it later by using its digital outputs into an external DAC.)

This is one powerful yet compact little streamer. More info: ***www.synergyaudio.com***

JUDGES' COMMENT

Fronted by the excellent StreamMagic app, this little Cambridge streamer is a pocket rocket that can bring streaming smarts to any existing audio system.

Merging +PLAYER +POWER

We could hardly head higher up the ranks than our second music streamer award — this is a version of Merging Technologies' NADAC (Network Attached Digital to Analog Converter), with the '+PLAYER' name indicating it is also a streaming player, and the '+POWER' noting that it requires a separate power supply. (The multiple versions in this range can be a bit confusing; there's also a +CLOCK which can be added, and Merging also manufactures eight-channel versions which look identical to the stereo versions, except for the rear panels.

But as we reviewed it, +PLAYER+POWER, the price is $34,285. Which is a fair amount of money, but your return on investment is perhaps the world's best streamer and DAC. The company is Swiss, and our previous favourite DAC was from that country's Weiss, so there's clearly something in the mountain air that brings equal clarity to their hi-fi (though Merging resides in the foothills north of Lake Leman, east of Lausanne).

The company's main business is in mastering and recording gear for sound engineers — the company has won so many technical Grammy nominations that it claims to have lost count. Its hi-fi range grew from requests to make available the technologies within its professional DACs, while adding the niceties required for consumer use.

The NADAC series hence has impeccable professional DAC quality within — and this +PLAYER adds streaming. But remember what we said about the best streamer being no use if the interface is rubbish? Indeed at first here we were underwhelmed by the size of the front panel display, and the lack of colour.

But Merging has been very clever here. It gifts you, within its price, a lifetime Roon subscription (currently worth US$830) ensuring you enjoy the very best possible interface the world has to offer, though make sure you read up on Roon hosts and its signficant system requirements to ensure your home can handle it. Dealers can advise on adding dedicated hardware if required.

That sorted, the sound of this player will melt you as it melted us. You won't need to audition for long to realise that you're in the presence of greatness, as it's instantly obvious that the sonics are superb — incredibly full, incredibly rich and incredibly detailed. Relax with Roon on your tablet, and welcome to the ultimate in music streaming and playback.

More info: *absolutehiend.com*

★★WINNER★★
2023
SOUND IMAGE AWARDS

JUDGES' COMMENT

It's instantly obvious that the sonics here are superb — incredibly full, incredibly rich, incredibly detailed. With a full lifetime Roon subscription included in the price, Merging delivers the ultimate in music streaming and playback.

Musical Fidelity MX-DAC

Things we like in a DAC: versatility, visual feedback, and of course audio quality. And these come together beautifully in the $1595 MX-DAC from Musical Fidelity, a company which knows a few things about standalone DACs, having been one of the first ever to make one. That was for upgrading CD players, whereas today we have a variety of digital sources needing reliable and high-quality conversion to an analogue output, and a host of filetypes they need to handle.

We should note that this is not a new product; it has been available for a number of years. It came to use recently as a pairing with the company's new MX-Stream, and much as we enjoyed that new unit, it was the MX-DAC that impressed us most, so workmanlike its manner, so clear its visual feedback, thanks to all those little LEDs along the front panel; you can see instantly the incoming sample rate and whether it is PCM or DSD.

The MX-DAC has two optical and two coaxial digital inputs, plus USB-B to which you can connect your computer. Previous MF DACs have also had Bluetooth, but that's not onboard here. Nor is there any networking or streaming, such as AirPlay or Spotify etc. (Those can be added via the new MX-Stream.) For outputs you can choose between the usual unbalanced RCA analogue outputs, or enjoy balanced outputs on XLR sockets if your amplifier supports them. Selection between the five inputs is via the front panel, a single switch shuttling through the five options, and there's a selectable filter switch alongside. For DSD delivered via the USB input, the filter switches between FIR-1 and FIR-3 filter types, and for everything else between a fast and slow filter. The joys of establishing your preferred setting can last many a long night — they are subtle!

On the inside the DAC chip is the highly-regarded Texas Instruments PCM1795, a Sigma-Delta DAC, and a separate sample rate converter uses the SRC4392. All inputs seem upsampled to 192kHz before conversion, but are processed and converted in the DSD domain. The only sign of its longevity is the maximum file handling resolution being 24-bit/192kHz PCM and DSD128, so just a few points dropped on versatility.

But what hasn't aged is its sound quality, which delighted us with its handling of playback from multiple sources, the lights confirming the sample rates as they changed.

Belated recognition for the MX-DAC, then: a reminder that one shouldn't celebrate only the latest, when the greatest may already be in the market. ***www.audiomarketing.com.au***

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Our award offers belated recognition for this compact and clear-sounding DAC which just sits in a system just doing its job, reliably delivering high-quality D-to-A conversion from its five inputs. It has excellent visual feedback as well.

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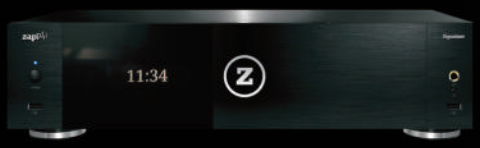

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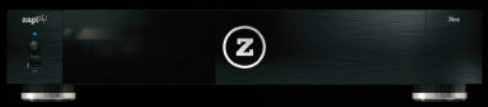

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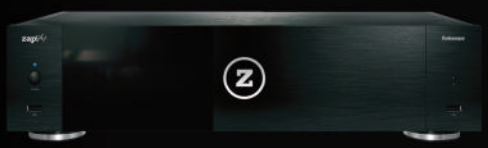

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Audio-Technica

AT-SB2022 Sound Burger

If you'll forgive us a WTF moment for our first turntable award, please welcome this blast from the past, the Audio-Technica Sound Burger, a portable and battery-powered record player which was revived in 2022 to celebrate the company's 60th anniversary. The original Sound Burger launched in 1982.

But the Sound Burger 2022 is not a replica: the AT-SB2022 has been brought into the 21st century. Instead of dual headphone outputs and RCA plugs, there are now no headphone outputs, because it has Bluetooth built-in, and just two sockets — one minijack audio output at line level for plugging into a system, and one USB-C socket to charge the player.

The USB-C charging marks a key change in terms of practicality — the Sound Burger no longer requires its three 'C' cells, instead having a rechargeable lithium-ion battery. It takes 12 hours to charge, says Audio-Technica, and then gives some 12 hours of battery power. There seems no reason, however, that you couldn't leave the USB cable plugged in at home, effectively running it on mains power.

The cartridge and stylus are modern versions of the company's 'VM'-type dual moving-magnet design, similar to but without the dual-screw of the AT3600L cartridge.

The one downside here is that the only Bluetooth codec supported here is the base-level SBC, with no AAC or aptX or anything else, so that the wireless sound quality will not be delivered at the best possible level.

Nevertheless we thoroughly enjoyed the sound. We had half-expected the kind of performance that emerges from extreme-budget record players — the Sound Burger was a novelty turntable, right? We should have thought more highly of Audio-Technica. The Sound Burger actually does a very respectable job, though we were unable to use our usual app to make speed, wow and flutter measurements, because of the clamshell clamp. The official specs quote wow and flutter at <0.25% (WTD) at 3kHz, with signal to noise (via the analogue output) at >50dB (DIN-B). Compare that with, say, the AT-LP60XBT, a well-regarded conventional and also Bluetooth-equipped turntable from the same company, and you'd expect Sound Burger's specs to be pretty average in comparison, right? Nope — exactly the same numbers. So in terms of published specs, at least, the Sound Burger keeps up with Audio-Technica's conventional turntables. So while we did find some mechanical noise, groove noise and occasionally stability issues more notable than we'd expect from a conventional deck, otherwise the Burger pretty much kept price with its price peers in terms of tone, soundstaging and musicality.

This is not a toy!

Sadly the company made only 7000 new Sound Burgers, and they sold out in weeks. Happily there are now more Burgers coming soon, hopefully around the same $429 price.

More info: ***www.audio-technica.com.au***

JUDGES' COMMENT

We were surprised to find that, while subject to the vagaries of being a lightweight portable battery-powered turntable, the Sound Burger is no toy, and plays vinyl respectfully! We're delighted the limited 2022 run has been extended for new 2023 Sound Burgers.

Music Hall Classic

The Classic is one of Music Hall's turntables originally designed for the US market, which was always the company's focus. Founder Roy Hall grew up in Glasgow, where he knew Linn founder Ivor Tiefenbrun from childhood, but it was for another longheld friend, Heinz Lichtenegger, the owner of Pro-Ject turntables, that he started Music Hall, bizarrely to deliberately compete with Lichtenegger's own US distributor, to "stir things up". Hall designed a turntable based on technology he'd learned at Linn, and from time distributing and repairing Revolver turntables, as well as technology developed by Pro-Ject. The first Music Hall turntable arrived in the US shortly afterwards.

Lichtenegger has been building Music Hall turntables in his Czech factory ever since, but this Music Hall Classic is not being built by Pro-Ject, rather in China, in a factory Hall discovered when he was looking to bring out the budget US-1 turntable which won our award last year. As can be seen by the substantial offering here at an RRP of $999 (but selling currently at $899), using Chinese manufacturing was able to deliver price points that were hard to match with European decks.

It takes a bit of chutzpah to name a new turntable a 'Classic', but Roy Hall was not only at the front of the line when chutzpah was being handed out, he circled back for a second helping. He's also a helpful chap to his customers, and feels they shouldn't need an engineering degree to set up his products. So here you have absolutely everything you need to start playing LPs straight away, the phono cartridge not only installed but correctly aligned, so that set-up just requires loading the drive belt and fitting the counterweight to static-balance the tonearm, dialling in the correct tracking force (2 grams) for the supplied Music Hall 'Spirit' moving-magnet cartridge (an Audio-Technica variant), and turning the rotary anti-skating dial so that its setting mirrors that of the counterweight. Wire it into your amp (there's a built-in phono stage, so any amp will do), and you're ready to play the black stuff.

The combo of Classic and Spirit MM cartridge proved excellent, the low frequencies full and solid, the midrange completely linear and the high frequencies sweet and extended; this is a turntable that sonically performs above its price — and even manages to look above its price as well.

★★WINNER★★ 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Music Hall turns to a new source for its 'Classic', and the result is a high-value turntable that looks great, is easy to use, and delivers performance above its price.

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Cambridge Audio Alva ST

Cambridge set us a quandary this year, by releasing two excellent turntables. We were extremely impressed with the Alva TT V2, an interesting direct-drive deck which at $3699 includes a moving-coil cartridge and clearly pitches for quality while still including conveniences like a built-in phono stage and even Bluetooth output.

But in the end we decided to recognise the value proposition of this Alva ST, which appeared in our turntable round-up last issue. This deck has a moving-magnet cartridge rather than moving-coil, but it retains exactly the same built-in phono preamp as used in the Alva TT V2, as well as support for aptX HD Bluetooth (again, the exact same circuitry). It even has the same tonearm as the Alva TT V2.

Yet this turntable has two very significant differences from its higher sibling. First, it is belt-drive rather than direct-drive. Second, its retail price was half that of the Alva TT, and recently went even lower — it's now $1299.

Not only is the price attractive, the Alva ST is a very attractive itself, and it comes with a pre-installed, pre-aligned Audio-Technica AT-VM95E moving-magnet phono cartridge. This is a versatile cartridge because it is so easy to switch in any of six interchangeable replacement styluses. The supplied green ATN95E retails around $50. But for special occasions you might slide in an orange $200 AT-VMN95EN stylus with its diamond nude-mounted directly on the cantilever, or keep an 'ML' version (red, $279) handy just for making digital reference copies.

The Alva ST has a die-cast aluminium-alloy platter, more resonant than the TT V2's thermoplastic, but with a thick rubber platter mat that prevents any audible intrusion. Indeed the output was free of wow, flutter or rumble; speed was highly accurate once we got the belt in exactly the right place; and sonically the AT-VM95E cartridge proved itself as it has so many times before. It has a smooth, rich sound quality that makes for very easy and very enjoyable listening.

And you can listen to the vinyl on your Bluetooth headphones! This is a fun experience, though the best quality comes through the cables. The Alva ST performs very well and is certainly great value for money — especially if you would otherwise need an external phono stage and/or a Bluetooth transmitter. And it just oozes class, looking fantastic for the money, so it won't only be a pleasure to play, you'll be proud to have it in your home.

More info: ***www.synergyaudio.com***

★★WINNER★★ 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

With a built-in phono stage and the ability to play via Bluetooth, the Cambridge Audio Alva ST offers versatility as well as solid replay of vinyl via the rich-sounding Audio-Technica cartridge. It's a great mid-price turntable.

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Pro-Ject X2 B + Phono Box S3 B

If you're looking to buy a turntable, Pro-Ject is one of the places to start. The company offers more models than any other brand in history ever has, and in our experience they're all reliably good value at whatever price you're shopping.

As our awards categories rise in price, it's also worth remembering that spending a bit more on your turntable will probably bring more benefit than for any other link in your hi-fi chain. Cheap turntables are very cheap; mid-range turntables can do a great job — but head just a little higher, and that old black magic starts happening.

This Pro-Ject X2 B certainly crossed that magical line during our time with it, assisted not only its Ortofon Quintet Red moving-coil cartridge ($499 if purchased separately) but also by the fact it keeps signals balanced all the way from cartridge to amplifier. Instead of the usual phono leads there is a five-pin XLR connector which keeps all the signals separate.

Two things follow naturally from having a balanced output. One is the provision of the moving-coil cartridge, because all 'mc' cartridges have 'balanced' outputs, whereas almost all moving-magnet cartridges are unbalanced, the 'negatives' tied to ground.

Second is the need for something to plug that balanced five-pin output into, which is why the $2699 X2 B is here partnered with the indispensible $659 Phono Box S3 B (pictured below). This, like the turntable, is an evolution of a previous model, the Phono Box S3, with the 'B' variant having a larger case, more features — and balanced inputs and outputs.

Apart from the wiring, the X2 B is a standard enough belt-drive turntable, to the standard we've come to expect from Pro-Ject, although it departs a little in adding 78 rpm speed to the usual 33⅓ and 45 rpm.

The result is an impressively detailed sound, the Pro-Ject duo performing beautifully with every one of the dozens of LPs we played, from jazz LPs and recordings of small groups through to large-scale orchestral works. The Quintet Red and Pro-Ject tonearm handled even the most complex groove walls with ease, even crescendos in the inner grooves, close to the LP label. Stereo separation was excellent, stereo imaging beautifully fixed in space. It's not just balanced operation, it's an outstanding moving-coil cartridge, an outstanding turntable and an outstanding phono stage. What's not to like?

More info: ***www.projectaudio.com.au***

JUDGES' COMMENT

It's not just the balanced operation: it's an outstanding moving-coil cartridge, an outstanding turntable and an outstanding phono stage. What's not to like?

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Holbo MkII Airbearing Turntable

From Slovenia comes the latest edition of Holbo's sole product, this turntable that does a number of things notably differently. It has only three legs. It keeps its branding to itself, presenting a plinth unadorned other than by buttonry. Its tonearm is very obviously not for pivoting, but adopts the linear tracking method which should, if successful, more closely track the information put into LP grooves by the lathes which, after all, cut the master discs using the same linear tracking motion.

But perhaps most unconventionally of all, this turntable arrives with an offboard box which is not an isolated power supply, nor an offboard phono stage, but an air pump. It's proudly branded "Holbo Air Pump". This is required because Bostjan Holc, Holbo's founder, set out to make a turntable in which the moving mechanical parts do not touch each other at all. By eliminating friction and physical transmission, he thought, micro vibrations and mechanical friction might be eliminated, and music could be revealed in all its magnificence, dynamics and musicality.

How to achieve this? With what Holbo calls an airbearing system, which places the platter on a bearing cushioned by air. That's not a platter floating around in mid air like a magic trick (Mag-lev style), but rather using an air-bearing for the spindle instead of mechnical contact, whether oiled or not. Indeed Holbo here doubles down on the theme ingredient, as the tonearm also moves on a bed of air. By reducing friction on the arm, you might overcome the issue of servos otherwise used, leaving only the issue of dragging around a connector cable.

Indeed we found the number one criterion for a successful Holbo installation is a very *very* level support surface; the tiniest deviation and the tonearm can 'drag'. But once truly level, the detail, the clarity and stability of the soundstaging delivered from the combination was extremely impressive. Even more than this was the feeling of complete background silence above which this was raised.

The original Australian LP of the 1970 Beatles' 'Hey Jude' compilation is a great pressing, and on the title track Paul McCartney's bass can emerge remarkably full and solid. We've heard it delivered to greater depth than the Holbo did, but here there was imaging and realism created by extraordinary lack of distortion; never have we had this album delivered so truthfully, and the decades dropped away, putting us in the room.

The MkII turntable and its combo pump sell for $12,000, cartridge not included. For our review the distributor Audio Marketing pre-installed and aligned a Kiseki Blue N.C. moving-coil cartridge, which retails for $3095, pushing the combination here above $15,000.

While its price and unique approach mean it won't be for everyone, we have to recognise this remarkable turntable's effortless insight into the details of a recording. It's certainly one to audition, and we doubt you'll be disappointed. Info: ***www.audiomarketing.com.au***

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Pump up the volume! Holbo's airborne platter and linear-tracking tonearm combine with a fine moving-coil cartridge to deliver effortless insight into recordings on vinyl.

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Musical Fidelity
M6x ViNYL

WINNER 2023 SOUND IMAGE AWARDS

This is our second award for Musical Fidelity electronics (see also the MX-DAC), from an ever-expanding range going great guns under the ownership of Audio Tuning, the Austrian owners of Pro-Ject turntables, and so gaining access to Pro-Ject's electronics manufacturing base in Slovakia.

From there came the MX-DAC, and this $3675 M6x Vinyl as well, a full-width unit that showcases the company's long-held talents at phono-level amplification. Musical Fidelity's M6x not only does so brilliantly, it is wildly versatile in what it offers. The front panel is stacked with more buttons and LEDs than most, indicating the level of switchable gain, switchable IEC curves, and adjustable input impedances and capacitances — all pleasingly settable via front panel controls.

With a moving-magnet cartridge, the six push-buttons to the right of the two MM/MC selector buttons vary load capacitance (load impedance fixed at 47kΩ, gain at 40dB). With moving-coil, six push-buttons to the right select load impedance, with gain fixed at 60dB, but with a extra switchable 6dB available. You can also switch from the standard RIAA curve to the IEC-RIAA curve introduced in 1976.

In terms of audio circuits the M6x is unusual in using discrete components (individual resistors, capacitors, transistors, etc.) rather than op-amp chips, and also unusual in offering both balanced and unbalanced inputs (the relative merits of which were discussed two page-turns back).

Channel separation and stereo imaging were superb; silences between tracks proved that the Musical Fidelity's noise floor is more than low enough, and since we never ran close to overloading the input, there was clearly margin to burn.

And if you are switching back and forth between different cartridges, the M6x Vinyl is one of the very, very few phono stages with multiple inputs that allows different loadings for each, *and* automatically selects the correct loading whenever you switch. Fabulous!

Info: **www.audiomarketing.com.au**

JUDGES' COMMENT

A full-width and fully versatile phono stage from Musical Fidelity, with three separate inputs (including a balanced option) each able to have different loadings applied — and recalled whenever you switch. Meanwhile discrete component circuits ensure a thrilling audio experience from these most delicate of musical signals.

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P421
MONO POWER AMPLIFIER

The P421 is March Audio's first Purifi-based mono-block amplifier. Milled from solid aluminium with a tough anodized treatment, it features the new Purifi 1ET400A technology, Bruno Putzeys' development of his previous Hypex Ncore designs, enabling extraordinarily low noise and distortion with further improved refinement in subjective audio quality.

Fully 2 ohm capable with ultra-low output impedance, the P451 can deliver up to 450 watts and 25 amps, ensuring tremendous grip and drive even with the most challenging of speaker loads.

P422
STEREO POWER AMPLIFIER

Like its P421 sister, March Audio's first Purifi-based stereo amplifier, the P422 (formerly the award-winning P452), has all these key qualities in stereo, packed into a beautifully built, high quality cabinet with balanced Neutrik XLR inputs (compatible with single ended RCA), and heavy-duty tellurium copper silver plated ETI Research speaker binding posts. High quality Canare speaker cable and Mogami signal cable is used internally for signal integrity and shielding. As the P452, this model won a 2022 Sound+Image Amplifier Award.

Hand-built and individually tested, both the P421 and P422 are backed with March Audio's 5 year warranty.

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Denon PMA-900HNE

WINNER 2023 SOUND IMAGE AWARDS

The first three award winners in our amplifier categories have something in common: they are all 'smart' amplifiers, by which we mean not only a Bluetooth input but full streaming and even multiroom abilities. Denon's 'house' platform for this is HEOS, which it shares with Marantz, so here you get full app-controlled streaming of the key subscription and free online services, all built in to the $1799 PMA-900HNE.

The surprise, really, is that this is the first Denon 'hi-fi' amp to have gained the HEOS platform. Previous HEOS amps and receivers were all from the AV division, such as the similarly priced DRA-800H, which on paper offers more power and a useful HDMI input. But the team behind the PMA-900HNE told us that the other amp "includes compromises on its amplification and its power supply quality," whereas the PMA-900HNE does not. Because it comes from the hi-fi division.

And you can hear the difference. This is solid hi-fi sound, opening wide a classic mix like The Temptations' *Just My Imagination*, each track clear in its panning, with several interweaving string parts, lead and harmony vocals, harp and drums kept hard left, and the combination of it all dripping with smooth musicality. One extraordinary bit of sound-staging came when playing a live Michelle Shocked track from the bonus disc for the 2003 rerelease of 'Short Sharp Shocked'. This is a camp-fire recording which sounds like a simple two-channel recording, and it blows out with plosive pops every now and then, but what impressed us when we listened through the Denon was the soundfield created from the atmosphere and audience around her, so wide and deep we almost huddled ourselves in towards the fire pit.

In terms of inputs there's no HDMI or USB-B, but you get three line-level analogue inputs plus a mm/mc phono input, a generous three optical digital inputs and one coaxial digital input, plus a USB-A slot which can play from sticks and drives. There's also Bluetooth, though this is SBC only, with no aptX nor even AAC, so Apple users will be best to use the included AirPlay 2 for direct streaming, while Android users should head straight to the HEOS app. The AirPlay 2 also allows Roon; this Denon amplifier is 'Roon Tested'.

The 900 Series does have an associated CD player, but if you've moved beyond silver discs to streaming, then you could reduce your hi-fi system to just a pair of speakers and a smart amplifier like this, in which Denon has taken its hi-fi amplifier expertise and added streaming to the front. It's a cracking result.

More info: ***www.denon.com.au***

JUDGES' COMMENT

Denon has taken its hi-fi amplifier expertise and added HEOS streaming and multiroom to the front, surprisingly for the first time. It's a cracking combination.

WINNER 2023 SOUND IMAGE AWARDS

NAD C 700

Our second smart amplifier winner makes an interesting comparison with the first. They both do the same thing, but from different starting points, Denon taking its hi-fi expertise and adding streaming to the front of it, while NAD has put the smart stuff firmly to the fore, most obviously in the 5-inch colour display behind the glass that fronts its solid aluminium body. This display often shows only monochrome things (it defaults to a graphic of VU meters, subject to your preferences) so that you don't realise it's full colour until it bursts into life with album art, as well as showing track progress, settings and more.

The smart platform is BluOS from NAD's sister company Bluesound under Lenbrook, offering one of the most reliable and enjoyable interfaces, though we gather a complete update of the app is due imminently, which will change the interface for this C700 as well as most other BluOS and Bluesound products.

The amplification is all NAD's own, of course; the $2699 C 700 sits just outside NAD's Masters series, though is in many ways comparable to NAD's $4495 M10 v2: roughly the same size and weight, a larger screen, but no knob. One key difference, though, is amplifier technology within. The C 700 uses HybridDigital UcD (Class-D), a switching analogue amplifier technology created by Hypex and adapted for NAD, while the M10 gets the higher Hypex Ncore technology. Here things are fully specified to hi-fi levels for a solid 80W per channel into 8 ohms.

There are two pairs of analogue inputs on RCA sockets (these are digitally sampled), one each of optical and coaxial digital inputs, a USB-A slot, and a very useful HDMI eARC input, which makes the NAD C 700 well-suited to providing TV sound as well as hi-fi music. But no phono or USB-B, nor any of NAD's MDC expansion slots. No remote control, either, but the C 700 can learn IR commands, and you have the BluOS app.

Despite using NAD's third-tier of amp technology, the C 700 immediately had our speakers singing, and at the price the C 700 has this region of smart amplification neatly nailed, whether you use this neat little amp in a minimalist set-up, or as the heart of a full hi-fi system. Info: ***www.ambertech.com.au***

JUDGES' COMMENT

Enjoy the big smart display, loads of streaming options thanks to the inclusion of BluOS, and of course the power for which NAD has been renowned for decades.

WINNER 2023 SOUND IMAGE AWARDS

Yamaha R-N2000A

JUDGES' COMMENT

This amplifier combines MusicCast streaming and app control with a relatively purist modern take on a classic amplifier. It's a magnificent release from Yamaha.

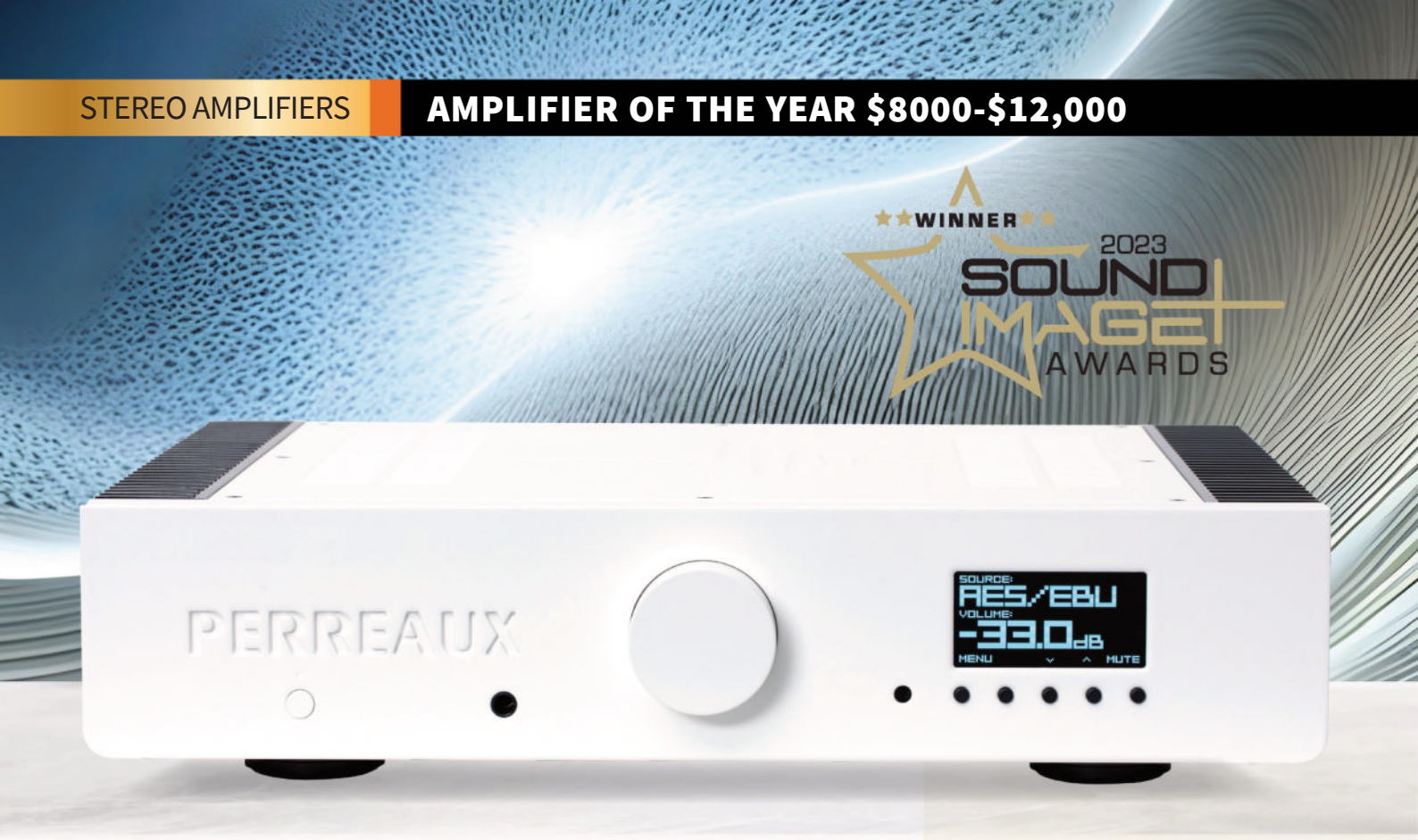
You would hardly know that Yamaha's smart 2000 Series amplifier is fully ready for the streaming age, so unobtrusively has the company embedded its MusicCast streaming and multiroom platform within, adding digital inputs to the rear, and tucking a quiet little digital display under the otherwise classic design of the $4999 R-N2000.

This combination allows three line-level analogue inputs, a moving-magnet phono-level input, and five digital inputs: two optical, one coaxial, USB-B for computer (thanks to the ultra-precision clock, this last is capable up to 32-bit/384kHz PCM and 11.2MHz/DSD256), and finally a very useful HDMI socket for TV audio. There's also the benefit of DAB+ and FM radio tuners inside.

In addition to the app-control and smart streaming of MusicCast, this amp has Yamaha's YPAO room correction available, even though our favourite button was 'Pure Direct', which minimises the processing and best lets you enjoy the quality of the amplification here. Power is quoted in a great many ways (the most 'hi-fi' specification seems to be 2 × 90W into 8 ohms), but you won't be thinking numbers when you hear the R-N2000A, which proved a solid and reliable delight in delivering clarity without becoming clinical, revealing detail but never restraining the dynamics to do so.

Excellent performance and classic looks that hide a full wireless and multiroom streaming platform: this is a magnificent release from Yamaha. Info: ***au.yamaha.com***

AMPLIFIER OF THE YEAR $8000-$12,000



Perreaux 200iX

Perreaux is a New Zealand company, founded by Peter Perreaux in 1974 and now owned by electronics engineer Edwin Nieman, also the founder of the award-winning Dunedin-based Kamahi Electronics, where he heads a team of nearly two dozen electronics engineers. Nieman continues to champion Perreaux's preferred use of MOSFETs in its amplifiers for their speed, stability and valve-like qualities — despite their cost and the complexity of power supply required to operate them efficiently. Perreaux's model numbers indicate their power into 8 ohms, here 200W (with THD+N below 0.005%, typically 0.002% @1kHz).

The 200iX provides four line-level inputs (one balanced), one mc/mm phono input, and six digital inputs: two coaxial, one USB, one AES/EBU, and two optical. Plus Bluetooth, for which a small antenna is attached.

Any of the analogue inputs can be set to bypass the internal volume control (useful for home cinema use); very unusually one of the coaxial digital inputs can do this too, which might be a clever way to put the amp under the volume control of a streamer, for example. Both a remote and an app provide control, and a front socket accesses the company's high-power Class-A headphone amp.

Clearly one of the 200iX's most obvious attributes is the ability to order any colour you like: standard colours are shown below, but you can order one "in any colour of your heart's desire — or black," says the company.

But it's not the colour scheme which wins our award: it's the sound. The Perreaux 200iX is a powerhouse that will drive any speakers to high volume levels with clean power. There's a 'low impedance' mode for wildly difficult speakers, but the default 'high impedance' mode delivered the full unlimited output just fine into all speakers we used, weaving subtleties as effectively as it slammed home dynamics. And when the sound stops, it stops: no overhang at all; the control is exemplary.

The 200iX is a remarkable achievement: attractive Antipodean design matched by a powerful and musical performance at the price of $9495. More info: ***perreaux.com***

JUDGES' COMMENT

It's not the rainbow colour scheme which wins our award: it's the sound. The Perreaux 200iX is a MOSFET powerhouse that will drive any speakers to high volume levels with clean power, while offering versatile input provision and the convenience of remote or app control.

WINNER 2023 SOUND IMAGE AWARDS

WIRELESS SPEAKERS
OF THE YEAR
UNDER $2500

Welcome to High-Fidelity

LSX II – The Definitive Compact Wireless HiFi

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WHAT HI-FI? ★★★★★ KEF LSX II

Listen and believe

KEF 60 YEARS

Mark Levinson Nº 5805

Mark Levinson the man now designs at Daniel Hertz in Switzerland, but Mark Levinson the brand continues to thrive under Harman International, where it lives alongside Arcam, JBL, Lexicon and Revel (to mention only some), maintaining the original ML tradition of sound as 'heard by musicians'.

To that end, signals presented to the No. 5805 amplifier's three line-level (two unbalanced, one balanced) and one phono inputs stay analogue right through to the loudspeaker terminals, along the way being amplified first by proprietary 'PurePath' circuitry (patents pending), which is dual mono, completely discrete and direct-coupled, and then by an equally dual-mono output stage configured as Class-A/B with two high-speed driver transistors operating in Class-A and six 260V 15A output transistors.

All this transistorised muscle means that Mark Levinson can rate the power output of the No. 5805 at 125W into 8 ohms, 250 watts into four, and "stable into loudspeaker loads as low as 2 ohms."

Power is supplied by a fully analogue power supply (no switch-mode noisiness here!) that combines a massive 500VA toroidal transformer with separate secondaries for the left and right channels, where the bridge-rectified outputs are smoothed by eight 10,000µF capacitors (four per channel).

The digital inputs (one USB-A, one coaxial and two optical, as well as Bluetooth) are processed by Mark Levinson's Precision Link II circuit, including an ESS Sabre 32-bit DAC with jitter elimination circuitry and a fully balanced, discrete current-to voltage converter, before passing to the amp circuits.

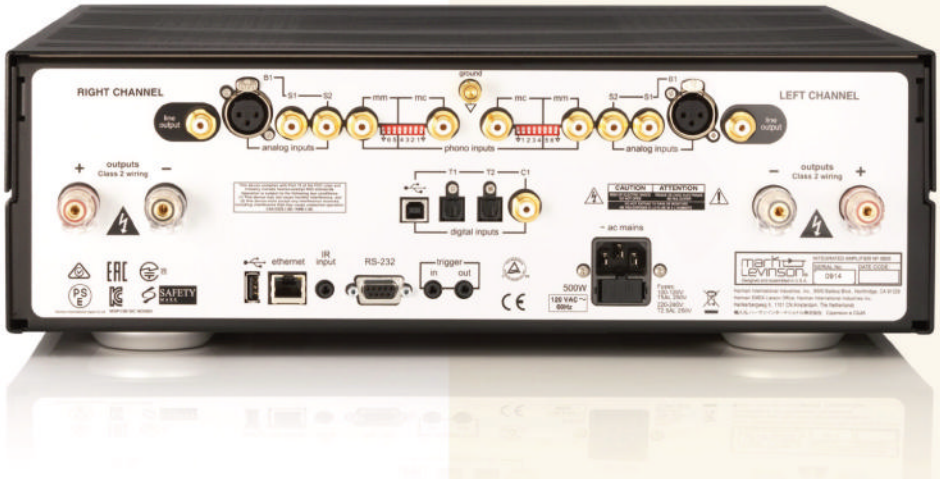
The sleekly austere appearance of the 5805's front panel rather belies the myriad control and operational functions that can be achieved by the rotary encoder on the right, plus control options via remote, an app, or via a very useful network web browser interface.

How it works is great, then, but how it sounds is even better, with an innate ability to deliver power, authority and scale, while at the same time being able to paint sounds with absolute precision and delicious delicacy.

Mark Levinson products are not only designed in the US but also still built there, to a standard that is second to none. This $15,999 Mark Levinson No. 5805 amplifier is an awesome construction, delivering awesome performance. Info: ***www.ambertech.com.au***

JUDGES' COMMENT

Harman's massive Mark Levinson No. 5805 amplifier has an innate ability to deliver power, authority and scale, while at the same time being able to paint sounds with absolute precision and delicious delicacy.



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-Steve Guttenberg, The Audiophiliac

*"Music had significantly more air, space, reverb trails, timbre, nuance, and emotion. **I was deeply impressed. Highly Recommended.**"*

-Stereophile

Learn more at **SVS**ound.com

McIntosh C12000 / MC3500 Mk II

The idea of pre-power amplifiers is often presented as being to separate the various functions of an amplifier, keeping the delicate preamplication circuits away from heftier power components. But in fact the history is the other way around — preamps started off separate, and only later got lumped into 'integrated' amplifiers as a convenience option. So pre-power combos are the true originals of hi-fi amplification.

In the C12000, the McIntosh team from Binghamton, NY, goes further than most, because it is one of their two-box preamplifier designs, further separating the audio section from the control and power sections. So in all this is a four-chassis amplifier: the power control, data ports and external control connections are in the C12000 Controller (above right), while the C12000 Preamplifier (left) has the audio preamp circuits along with the inputs, all analogue and numbering 12 in all: six balanced, four unbalanced, and two unbalanced valve-equipped phono inputs configurable for either moving-coil or moving -magnet cartridges (with adjustable capacitance, resistance loading and gain).

The preamplifier offers a remarkable choice of either valve or transistor amplification, thanks to McIntosh's Hybrid Drive. For valve output, each channel has two 12AT7 valves and one 12AX7A tube; in solid-state mode each output is delivered via a discrete balanced op-amp. Choosing which amplifier type you'd like to enjoy is as simple as flicking a switch. Your decision as to which to use, according to McIntosh's engineering team, will depend on the music being played, the audio components in the rest of your home audio system, and your personal preferences regarding sound quality.

The second pair of boxes here are the MC3500 Mk II mono power amplifiers, shown here from the valve-laden rear (below) and the green'n'teal front (opposite). This design is, of course, a homage to a true legend, the original McIntosh MC3500, dozens of which were used to power the sound system at the most famous music festival of them all, 1969's Woodstock. When it came time to celebrate McIntosh's 50th Anniversary, McIntosh President Charlie Randall decided his company should build a MkII version "that takes its inspiration from the original 1968-71 MC3500, and incorporates everything we have learned since the 1960s."

The MC3500's eight output valves are EL509S beam pentodes, a modified version of the original EL509 with no top plate-cap and an 8-pin octal base. In this design they deliver an audio output of 350W (conversatively-rated, says McIntosh) into any 2-ohm, 4-ohm or 8-ohm load — and also output a large amount of thermal energy: they run hot!

The driver section of the MC3500Mk II is more like that of the original MC3500, being fully balanced, using one 12AT7A and three 12AX7A valves. The output transformers are also inherited from the original MC3500, with a 'Unity Coupled' design that inventors Frank McIntosh and Gordon Gow refer to as a "unity coupled balanced differential feed".

The McIntosh foursome delivered exemplary sound quality. Bass was precise, depthy, completely free from distortion, and with no overhang at all, with a realism in valve-mode that still continues to elude solid-state amplifiers despite the leaps and bounds made in technology. Further up we revelled in the crispness and snap of percussion, an authenticity even to hand-claps that we'd never heard before. Ultimately when searching for a word we settled on 'natural' — pure, simple, unadulterated music, not 'bright' or 'hard' or 'soft' or 'warm' or 'euphonic'... natural. And naturally there's a price to be paid: the C12000 pair cost $29,990, and the power amps $59,990 the pair. More info: ***synergyaudio.com***

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Take two separate preamplifier boxes, add two mono power amps based on the amplifiers which powered the PA at Woodstock... and the result is pure, simple, unadulterated music: not 'bright' or 'hard' or 'soft' or 'warm', just entirely natural.

Adcom GFA-555se

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

This old-school stereo power amplifier may lack a few circuit niceties now common in hi-fi, but it punches far above its weight when it comes to high power, low noise, low distortion, extraordinarily extended frequency response and, of course, superb sound.

It's true that Adcom's power amplifiers may not exude the ultimate in physical grace. But is that what you want from a power amplifier? Or would you prefer instead the evolution of a 1985 amplifier that became not only Adcom's best-selling and most famous model but also one of the most famous amps of the last century. Stereophile's contemporary review by Anthony Cordesman said: "*It is so clearly superior to past amplifiers in the low-to-mid-priced range — not to mention most amplifiers costing two to three times its price — that I can unhesitatingly recommend it for even the most demanding high-end system.*"

Adcom seemed similarly confident about its abilities: the initials G and A stand for 'Great Amplifier'. We'll leave the F to your imagination.

The $2999 555se is a stereo power amplifier, and although Adcom is now owned by Everest World Company in Thailand, building in specialist factories in Taiwan and China, the design continues Adcom's original circuits along with modifications made over the years. The output transistors are MJ15022/23 pairs (four pairs per channel), very beefy devices rated for 16A/250W operation. It is rated as delivering 200W per channel into 8-ohm loads and 300 watts per channel into 4-ohm loads. You can also 'bridge' it for a mono amp rated at 600W, though doubling its 0.04% THD+N distortion.

This immense power on tap and the solidity of the GFA-555se's low-frequency performance was audible from the first audition; it went on to prove itself across the spectrum of both frequencies and genres, while any brief silences were *so* silent as to be almost shocking, proving the Adcom to be not only a powerful amplifier but also a quiet one.

It may lack a few circuit niceties now common in hi-fi — such as a standby circuit, for one, and output protection for another — but it punches far above its weight when it comes to high power, low noise, low distortion, an extraordinarily extended frequency response and, of course, superb sound. We highly recommend an audition. More: ***www.ngpdistribution.com.au***

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Ruark R2 Mk4

In our recent review of Ruark's updated 'smart music system', we took pains to point out that while this looks like a modern take on a classic radio, the R2 is far more than that. Indeed in most respects it matches any of the streaming wireless speakers sold under major multiroom brands — you get app control from a smart device, it has wireless networking, direct streaming of services like Spotify, Deezer and Amazon Music, full access to global internet radio stations via its own app, and a specific 'podcast' source. Plus there's Bluetooth in, with which you can stream anything else you want via your smart device of choice.

Indeed the R2 goes beyond the abilities of most wireless speakers in also including both FM analogue and DAB+ digital radio, something few wireless speakers include.

Then there's the look of it. Most modern wireless speakers are featureless black or white boxes. Compared those with the gorgeous R2, its polymer cabinet slightly tilted back, highlighted by a slatted grille made of wood. Our review unit came in the light cream lacquer with an ash-wood grille (pictured) which drew praise from all those who saw it, while a darker 'espresso' with a walnut grille is also available.

And even though this latest R2 Mk4 has skimmed a few centimetres from the depth of its predecessor (better for window ledges and bookshelves, says Ruark), it is nevertheless larger in size at 34cm wide and 18cm high than, say, the Sonos Five or the Denon Home 250. Yet it's just such a lovely design that it's a pleasure to have in the home, compared with a featureless modern box designed to hide rather than contribute to décor.

Another differentiation is the amplification technology within. While Sonos (and we'd guess Denon) uses Class-D amplifiers, Ruark's R2 has genuine traditional Class-AB amplification to drive its stereo drivers, which are Ruark's NS+ full-range design, backed by neodymium magnets. All of which assists the final point of comparison: sound quality.

We loved the R2 Mk4's sound — rich and woody, remaining full even at quite low levels thanks to Ruark's use of adaptive EQ to put a tilt of bass into lower-level listening. (There's also a loudness setting, which some material can benefit from switching off.) Voices are particularly well handled, both male and female, so the R2 delivers podcasts beautifully.

So the R2 Mk4 may look like a really nice $899 radio, but what your money buys is a high-specification streaming music system, boosted by full radio abilities (other than AM, which it doesn't have).

Under the control of Ruark's longstanding Rotodial (above right), the R2 Mk4 can trickle out daytime radio as background music or crank something louder from its sources or minijack input. So a good-looker that sounds great. More info: ***www.synergyaudio.com***

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

We love the Ruark R2 Mk4 both as a design and for the easy ways it brings access to music. Its modern streaming options plus radio make it a powerful alternative to less attractive modern wireless speakers.

MUSIC SYSTEM OF THE YEAR OVER $1000

Sonus faber Omnia

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Sonus faber's Omnia exudes quality from its wide walnut control surface to its rich expansive sound when streaming music. And don't miss its secret EQ modes, which can make it even better.

An all-in-one system from Italian artisan speaker company Sonus faber is not a complete surprise — company founder Franco Serblin created a bizarre 'The Snail' in 1980, and in 2016 Sonus faber released the large SF16 with motorised pods that extended outward like wing mirrors.

The new Omnia clearly inherits elements from its predecessors, but also simplifies things, with side speakers in the main body, for example, rather than out on wings. Its expansive walnut-topped laminated-wood surface, 65cm by 28cm, is split by wide strips of light (and is rather bravely entirely flat).

The Omnia has a total of seven drivers. Behind the curving fabric grille of the front is a pair of 76mm paper-pulp cones flanked by 19mm neodymium-backed silk-dome tweeters. There is a single bass driver, a central downfiring 165mm aluminium-cone woofer. Then at the ends, something less conventional — 45mm cellulose-pulp-membrane drivers, firing sidewards.

Round the back there are only two audio inputs. One is a useful HDMI ARC socket that allows playback from a TV, as a rather sophisticated soundbar! The second is a weird miniDIN socket for which you'll require the supplied adaptor to plug in an analogue source; it can be switched between line-level or phono. But of course this is also a streaming box: there's both Spotify Connect and the newer Tidal Connect, along with both Chromecast and AirPlay 2 for direct streaming from Android or Apple devices. Streaming options tend to auto-select when used, but there is a little supplied remote control; there's no app, but you can access its settings via a web browser. You should do this, because there's one setting that can't be changed any other way — a 'Loudness Maximizer' used to enhance performance at low levels, and a 'Crescendo' effect which upscales stereo to play from the Omnia's side-firing speakers. These additional drivers can bring sweetness to the strings and sometimes a spread of sound and detail beyond the Omnia's limited physical size, for an overall performance that belongs more in the realm of real hi-fi than something from an all-in-one system like this, however posh.

However, turning the 'Crescendo' effect 'off' reveals the Omnia capable of a leaner and cleaner sound which some will prefer overall, and many may prefer for certain material. Once discovered, we left it that way.

The Omnia not only sounds wonderfully serene across multiple genres, it also scales impressively with music, and with TV from that HDMI input. There's not the bottom octave of a subwoofer, nor the width that stereo speakers will bring. But it's solid, powerful, musical, and always clear. The $3495 Omnia is an impressive, upmarket all-in-one. Info: ***www.synergyaudio.com***

KEF LSX II

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Not pocket money for such dinky speakers, but you get the amps, the streaming, the HDMI input… this could be your entire system for movies and music, and they sound great.

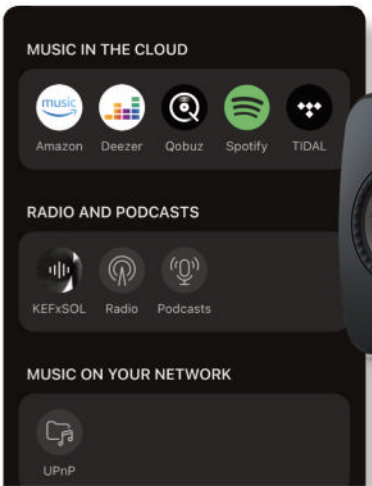
So we arrive at one of our favourite categories: wireless speakers. They can be the ultimate compact solution: streaming speakers with amps inside — no other product required. Or you can plug into the inputs for a bigger system.

KEF has had wild success combining wireless smarts with active speakers using its compact UniQ drivers; these put a tweeter in the throat of the woofer, not only saving space but delivering a point source which benefits soundstage imaging and detail. It started with larger standmounts, has recently released the remarkable LS60W wireless floorstanders, but one of its best successes has been the dinky little LSX pair, now in their 'II' edition at $2300. While little externally has changed, we thought their sound dramatically upgraded.

Their greatest achievement is in not sounding small. The DSP within does a fine job of making them sound impressively balanced even during casual listening. Bass guitar lines were solid; indeed there was almost too much bass at times, but happily the KEF Connect app is stuffed with options, including EQ. The midrange was pretty luscious, with a clarity and depth that lent itself to sparse acoustic and classical works.

While they could stream alone, you get one analogue minijack input, one optical digital, a USB-C socket, and finally an HDMI input designed to connect to a TV's ARC-equipped socket, thereby playing TV audio. The two speakers communicate wirelessly at 24-bit/48kHz, or with a cable at 24-bit/96kHz. And they come in Carbon Black, Mineral White, Cobalt Blue, Lava Red, and a 'Soundwave by Terence Conrad' with gold/brown wavy lines.

This is a great revision of the original LSX. The new app improves set-up, the abilities remain strong, and the sound is now far better than the originals. Info: ***au.kef.com***



PSB Speakers Alpha iQ

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Small but surprising standmount speakers which have both amplification within and extensive streaming/multiroom smarts available via the excellent BluOS platform from Bluesound. It's a powerful combination.

It had to happen. PSB Speakers was already making active versions of its Alpha series compact speakers, using unspecified amp modules within. But PSB is the sister company to NAD, with 50 years of amplifier expertise, and to Bluesound, now with 10 years of streaming skills under its belt. Add those both to the 50 years of unprecedentedly research-based speaker wisdom available from the company's Paul Barton, and you get the Alpha iQ — PSB speakers with built-in BluOS streaming and impeccably-managed power to drive them. There are great advantages for the designer with active speakers, since they can precisely match drivers to the amplification.

Adding a full streaming module doesn't come cheap, though, and the Alpha IQ price of $2799 may look high for what are pretty dinky standmount speakers: just 25cm high, with a four-inch woofer above, rather than below, a 19mm aluminium-domed tweeter, Barton's preferred arrangement to keep the tweeter's lobe coincident with the woofer. The drivers are similar to those in the P3 passive speaker, which are a mere $399, though the cabinet here is pushed larger, either to improve their response or to fit in the extras.

But the value equation is entirely deceptive, as with all wireless speakers, because you're getting a full system of source, amp and speakers here. The source, as well as the overall control and set-up, comes via the BluOS app, accessing its endless streaming services in what we would normally say was a great-looking and efficient app, but we've just heard that they're about to change it completely, and we haven't seen the new version, so we don't really know.

What we can tell you is how the Alpha iQs sound. They are dynamic and punchy, yet they descend remarkably low with a surprisingly long roll-off of bass extension. They came out arse-kicking with boygenius' *$20*, yet so tight that at the drop there was a sudden moment of utter silence before the break.

In this way they can take you entirely by surprise. Peter Gabriel's *Playing For Time*, from the gradual release of his new 'i/o' album, has a gentle first half, the iQs rolling forth soft piano and a full articulate bass line with a depth and resonance extraordinary from such small boxes. Then they fully delivered the dynamic push in the last 90 seconds: full, powerful and unignorable, yet keeping Gabriel's voice tonally accurate throughout the rise.

So surprising are the Alpha iQs that we may not convince you with words: go and hear a pair. And take your wallet. Info: ***www.ambertech.com.au***

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Paradigm Founder 40B

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Paradigm's long-established reputation delivers in these attractive and dynamic standmounts loaded with the Canadian company's technology – and celebrating the co-founder's recent return.

Back to ordinary passive speakers now, although there's very little ordinary about our first award-winners, another Canadian brand (as is PSB on the previous page), and one that has been back under the control of original co-founder Scott Bagby for four years now, along with Anthem (see our AV processor award) and MartinLogan too.

We mention this not only for background but because it explains the name of the loudspeaker series from which the 40B comes — the company's co-founder is back, with a 'Founder' Series. It includes floorstanders, a centre and an unusual LCR three-way, so along with Paradigm's highly-regarded subwoofers there's everything required for a home cinema set-up if you wish — though this award celebrates the solo stereo performance of the only standmount in the range, the 40B.

This is a two-way, bass-reflex design around 37cm high, and it comes loaded with acronyms: the 25mm dome tweeter is an 'AL-MAG high-frequency driver with an OSW and a PPA lens'. AL-MAG refers to an alloy of aluminium and magnesium with a very thin ceramic layer. 'OSW'is the 'Oblate Spherical Waveguide' in front of the tweeter, focusing the tweeter's output.

The 'PPA' stands for 'Perforated Phase Aligning' and it's a type of lens positioned in front of the tweeter dome that not only protects it from damage, but is also intended to — again in the words of Paradigm — "ensure that all frequencies arrive at the listener's ears at the same time." This is much more prominent on the bass driver, which also has Paradigm's third-generation 'Active Ridge Technology' (ART) driver surrounds which are both corrugated — 'ridged' — and curved.

There's plenty more tech, but it's their sound that wins the award — although it's partly no sound at all. They had a remarkable ability to disappear, leaving us deep within the music, enjoying an incredible realism across the midrange and into the high frequencies, delivering true-to-life tonality of instruments and the talents of musicians playing them. Meanwhile the depth of the bass they can deliver, and the quality of that bass, proved astounding for a standmount this size, assisted by the woofer's large magnet and voice coil.

Currently at $4499, the Founder 40Bs are stellar standmounts. Info: ***audioactive.com.au***

WINNER 2023 SOUND IMAGE AWARDS

March Audio
Sointuva WG

JUDGES' COMMENT

From a company in Albany, WA, come these solid and beautiful standmount speakers that leverage the very latest driver technologies for some thrilling results that had our listening rooms singing with beauty yet kicking serious arse.

March Audio is based in Albany, WA, where it designs and builds amplifiers and loudspeakers. These already include the Sound+Image award-winning P452 stereo power amplifier — now updated as the P422. But we were keen also to hear the loudspeakers, hampered only by component changes: the tweeter changed between our first listen and our second, and since then the bass driver has changed as well. So what we're describing here has now changed, albeit with an upgrade, according to the company.

That upgraded driver (and the two passive drivers on the rear) come from Purifi in Denmark, a company which also makes Eigentakt amplification, as used by both March and NAD. Its driver is a 6.5-inch long-throw driver, decribed by March as "*the lowest-distortion longest-stroke driver of its size; indeed its performance exceeds that of far larger drivers... it also has extremely low compression, so sounds very dynamic.*"

And that nicely summarises what we heard: indeed we were blown away by the performance of the $6000 Sointuva WG (*sointuva* means 'harmony' or 'resonance' in Finnish). They're not small at 44cm high, but they sound even larger; on one track where they absolutely ripped things up with a taut and powerful presentation, the combo of drivers and radiators delivered an amazing underlying bass to the chorus that we hadn't previously realised was even on the recording. There's a slow roll-off into the 30s of hertz here, fulfilling March's desire to achieve a sizable bass from a not-too-large speaker.

The midrange itself is also worthy of praise, especially when under less frenetic circumstances, and they're fast, nailing big beats big time, though their sensitivity is quite low at 83dB/W/m, so they will thank you for plenty of high-quality power when you do so.

In beautiful Australian wood finishes, built here, and sounding magnificent, the March Audio Sointuvas are serious arse-kicking award-winners. Info: ***marchaudio.com***

Polk Signature Elite ES60

Moving up in scale to floorstanders now, we can immediately boggle at the value on offer from speakers that are here loaded with a 25mm terylene tweeter and a line of three 6.5-inch mica-fortified polypropylene woofers, with a tower-style cabinet 113cm high, and coming in at $2799 the pair — so undercutting either of our winning standmount designs. How can this be?

You might point to pricier drive units in the standmounts, but you might also highlight Polk's market power. Even before Sound United bought Boston Acoustics and B&W, its two speaker brands Definitive Technology and Polk Audio made it the largest supplier of hi-fi loudspeakers in North America. The resources behind the brand are substantial, and its scaling effective at creating products with apparently high value; manufacturing in China assists this further.

Take this upgrade to one of its best-selling models: it's more like a whole new design. The ES60 replaced the outgoing S60, in the process gaining new bass/midrange drivers, a new crossover, re-vamped internal bracing and a whole new exterior. The unusual 25mm terylene dome tweeter was kept, as was the cascading tapered crossover design and the fact that the cabinet is — despite its newly remodelled exterior — still a bass-reflex floorstanding one. It also has Polk's latest 'Power Port', a down-firing bass port that fires into a diffuser, spreading the bass in all directions.

This not only makes them easier to position, the resulting low-frequency performance proved excellent: bright, bouncy, highly dynamic and certainly extended. We played Esperanza Spalding's 'Songwright's Apothecary Lab', and the bass quality was obvious right from the opener *Formwela 1*, but there's more (bass and piano) on *Formwela 6*, and it was stunning.

This was another of those speakers that performed so effectively we got all caught up in the music, rather than what the speaker was doing. That's as it should be. Polk has been building speakers for 50+ years; it knows what people like in terms of sound quality — and when they ask for a price. The ES60s deliver on both counts. Info: **au.polkaudio.com**

★★WINNER★★ 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

You may need to double check the price-tag here, such is the value on offer from Polk's highly musical towers.

WINNER 2023 SOUND IMAGE AWARDS

ELAC
Vela FS 407

Modern décor has driven the move to tower speakers rather than the wider boxes of old. But tall thin towers generate difficult cabinet standing waves, and with multiple bass drivers it can be hard even to position the bass port without issues. Elac's solution in the Vela FS 407 is to use two vents — one downfiring to enable easier positioning (see opposite), and a second vent at a point that has opposite phase excitation from the cabinet's standing wave.

That's just one innovation whch assists these Elacs (the German company is more fully called Electroacustic GmbH) in their remarkable performance. Another is version five of Elac's famed JET tweeter, which employs the innovation of squeezing sound from a concertina-like diaphragm which dates back to Oskar Heil's Air Motion Transformer, first used in 1972. Various companies have since made their own versions, Elac very successfully, with the latest version claiming frequency response beyond 50kHz, and unmarred by the resonances that appear in dome tweeters. But it's not entirely the extension that impressed us when listening, it was the smoothness and silkiness of the sound quality, even with high-frequency flute notes, which are as difficult for a tweeter to reproduce as for a flautist to play — yet the JET 5 tweeters did it beautifully.

Below is a pair of what Elac calls 'crystal membrane' cones, a 150mm (6-inch) sandwich design with a paper cone bonded to the back of a stamped aluminium cone, with extraordinarily wide rubber roll surrounds. With the 2.5-way arrangement, both of these cones deliver bass frequencies, but midrange frequencies are delivered only by the uppermost of the two cones.

It's a recipe for success — you can instantly hear the immediacy of fundamentals, with no overtones or doubling at all. They deliver smooth, engaging sound across the entirety of the audio spectrum and look extremely attractive while doing it, being very slim towers exactly one metre high. They currently retail at $7995 the pair. More info: ***synergyaudio.com***

JUDGES' COMMENT

Beautiful tower loudspeakers with Elac's latest JET tweeters and overall a wonderfully smooth and engaging sonic performance.

Bowers & Wilkins

804 D4

WINNER 2023 SOUND IMAGE AWARDS

Many readers will need no introduction to the 800 Series from Bowers & Wilkins. The top model is used in Abbey Road Studios (strangely half-hidden behind the mixing desk, but they're there), and each renewing of the flagship range is a major event for the famous UK brand (owned by Sound United, now owned by Masimo, a California company with a broad portfolio of hospital and home medical technology solutions).

Last year we awarded the 805 D4 as a sweet spot in the range, the larger standmounters, benefitting from their tweeters-on-top. This time we recognise the range's entry-level floorstanders, the 804 D4. For those who can't accommodate or can't afford the very toppermost 800s, these speakers include all the technology developed for this latest series in a more tower-like design, at a price currently $22,900 — certainly not small change, but a good whack down from the $57,900 of the range-topping 801 D4s.

Our review pair looked stunning in the new Walnut finish created specifically for this latest 800 Diamond series, but Australia also has all three other finishes available — satin white, gloss black, and B&W Rosenut.

The tweeter on top is, of course, the latest diamond-domed design, isolated with new floppiness from the main cabinet. The midrange driver uses the mysterious Continuum cone and gains the company's radical new skeletal 'biomimetic' spider. The two bass drivers are the latest 'Aerofoil'-profiled sandwiches of hard foam between two skins of woven carbon-fibre. Each of these drivers sits in its own metal tube, and these tubes are then fixed through the baffle in such a way that they protrude from it by 30mm at the edges, because the cabinet itself adopts the company's stylish 'reverse wrap', folded around the front to join the wide fluted metal 'spine' at the rear of the speaker.

There's too much tech here to detail in full (see our full review for more!), so let's move to that signature Bowers & Wilkins sound, still solid here, yet most definitely improved, most notably by virtue of a smoother, more realistic midrange and by high frequencies that sparkle ever brighter and are delivered with even greater purity than before. To hear them is to love them. Be warned!

More info: ***bowerswilkins.com/en-au***

JUDGES' COMMENT

That signature Bowers & Wilkins sound is improved still further, with more realism, greater purity, and stunning looks.

Revival Audio Atalante 3

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

An astounding debut product, the Atalante 3s' can highlight elements in an extraordinary sound-stage while retaining truth of tone. Amazing.

A special award to close our loudspeaker winners: our 'Editor's Choice' award is reserved for something special which doesn't fit into our other categories. Here we had a simple clash of standmounts and an argument over which should win: it couldn't be resolved, so we're singling these Revival Audio Atalante 3s for special recognition, seeing as how it was our Editor arguing for their inclusion. His two favourite visiting speakers of the year were the March Audios seen earlier in these awards, and these debut speakers from a new French company, Revival Audio.

EDITOR'S SOUND IMAGE CHOICE

The Atalante 3s are $4000 standmounts, a little nostalgic on the outside, but loaded with hidden innovation from a pair of industry stalwarts who have "nearly four decades of 'savoir-faire'" as they say. This includes their own drivers. There are offset 28mm tweeters with a 'RASC' coating, a novel Anti Resonance Inner Dome behind the visible dome, and an interesting back-chamber damping system. Then the woofers use new materials, notably basalt, extracted from grey igneous lava stone, and touted as being sustainable, recyclable and not, like many cone materials, derived from petroleum products. Meanwhile the cabinets are beautiful: a rich dark and tactile hand-picked walnut veneer, split just above the midpoint by a lovely line of inlay right around the speaker, meeting on the front baffle with a little laser-etched rosette with the double-R Revival logo.

We were delighted Revival's initial pair of products did not follow the trend towards décor-friendly slimness; it shows in the sound, where the bass is strong and held rock solid through whatever torture tests we aimed at them.

But most of all we were transfixed by soundstaging that was simply extraordinary — wide, lively and shimmering — a physical presence spread wide and forward, drawing us in to nearly everything we played.

This ability to highlight mix elements while retaining a truth of tone made the Atalante 3s a riveting listen, and one that our Awards simply could not ignore. Sound the gong!

More info: ***audiomarketing.com.au***

SVS 3000 Micro

There's an aphorism in hi-fi that for movie bass you need a subwoofer, but a bad subwoofer is worse than no subwoofer at all. In fact this is true of bass within music as much as for movies: underspending on a bad subwoofer just brings bad bass. And a subwoofer that's too small can't reach the frequencies to do its job properly.

So we tend to ring the bells when we find an exception — because SVS has here delivered its first-ever 'micro' subwoofer, a 39cm square footprint and just 28cm high. And this is a departure, since the company has hitherto favoured 'big', as witnessed by its PB16-Ultra, which has a 16-inch bass driver that's fitted with a monster 8-inch voice coil.

Better still, the 3000 Micro retails for a reasonable $1799 (it seems widely available for $1619), making it a practical support for standmounts around and above that price, while also able to support the deep stuff within movie soundtracks. When Newport Labs benchtested this sub for *Australian Hi-Fi*, it found a pass-band flat to within 1.2dB and beautifully smooth and controlled high- and low-frequency roll-offs that broadly agreed with SVS's published claim for a response of 23Hz to 240Hz at -3dB down. This 'textbook' subwoofer response provided solid underpinning to The Stranglers' *Peaches*, that snarling bassline from J.J. Burnell punctuated by the kick drum, then the line again with a drum flourish and that punctuation again. Then the organ gets in on the groove. The SVS 3000 Micro did a fantastic job of pounding this out. It's fast, too, as witnessed by the bonkers opening to *Hysteria* from Muse's 'Absolution'.

It achieves this impressive performance with a pair of generous eight-inch bass drivers, one on each side (this is equivalent in area to a single 12-incher), thereby spreading the 800W of discrete MOSFET power over two voice-coils, while the forces on the cabinet from one driver cancel the other's.

The SVS 3000 Micro's neat back panel offers perhaps the greatest precision settings we have ever seen across volume, phase and level, and you don't even have to get down and press the buttons because SVS provides an app to tweak things to your satisfaction.

For any small to medium system, we reckon with the 3000 Micro you'll be very satisfied indeed. Info: ***www.svsound.com.au***

JUDGES' COMMENT

Able to get deep despite limiting itself to a 10-inch cabinet, the SVS 3000 Micro is a rare small sub that performs beyond its size.

WINNER 2023 SOUND+IMAGE AWARDS

JUDGES' COMMENT

A return to our awards for Magico's phenomenally good high-performance ASUB subwoofer, complete with its clever computer-based room and speaker tuning.

Magico ASUB

This is a rare return to our awards — we could count the products that have won two Sound+Image awards on one hand, and to this elite collection we can now add Magico's ASUB. Why does it get a second gong? Because when it returned to our offices this past year, it reminded us that, simply put, the Magico ASUB delivered the most fun we've had — in both calibration and use — with any subwoofer we've ever reviewed.

It's a fairly elite sub, priced at $13,950, but then California's Magico is no ordinary brand. As with all Magico speakers, the ASUB subwoofer's enclosure is made from 10mm-thick sheets of solid 6061 T6 aluminium — a precipitation-hardened alloy NASA used to create the plaques mounted on the Pioneer 10 and Pioneer 11 space-craft. So well hard. Internally it is braced and damped, and it's a sealed design, Magico's founder Alon Wolf having no truck with bass-reflex cabinets. And the 46×37×45cm box weighs 49kg which, as the courier who delivered our review sample told us grumpily, "is heavier than my wife".

The 10-inch cone is also aluminium (Magico claims that many of its cone drivers are so strong you can drive a car over them, but we wouldn't suggest you try this at home). A grille is optional and costs extra.

Connections are via dual RCAs or a single XLR balanced connection with a 'through' output connection, but there's no volume control, low-pass filter control, phase control on the rear panel… all can instead be set using a computer with customised Hypex software, with three presets selectable from the subwoofer itself to store your choices from a wealth of parameters.

Not only does this make it among the most flexible subwoofers we've reviewed, Magico's ASUB is a phenomenally good-sounding high-performance subwoofer, whether delivering extended bass for larger orchestral instruments in classical pieces, for rock drums and bass guitar, for the 27Hz heartbeats of Pink Floyd's *Speak To Me*, or for movie plane crashes, Lightcycle races or light-sabre battles. Like we say, fun fun fun from calibration to performance! Info: ***absolutehiend.com***

Marantz Cinema 60

It's not often we can congratulate an AV receiver for ease of use — they do so many things these days, and require so much wiring up that AV receivers remain the most complicated component of any system. Yet the new Cinema range from Marantz does make things as easy as one could hope. At initial set-up, the Cinema 60's tiny porthole display simply instructed us to "see the TV", and this large-screen walkthrough then covered everything from wire-stripping to calibration. We reckon even a newbie should make it through, and thereby enjoy the excellent performance of this fully-equipped seven-channel receiver.

The new Cinema models follow the company's recent amplifier designs in having an attractive scooped-out frontage behind the main front-plate; gone is the chunky flap of old that revealed all sorts of buttons and inputs underneath. Inputs are all at the rear here: six HDMI inputs, three marked as 8K compatible, and two outputs, one for a TV which offers ARC or eARC, and a simpler monitor output for a TV which doesn't.

There's also the huge bonus of HEOS here, using the home network and the internet to bring all manner of streaming music and multiroom operation to the receiver.

The receiver's audio circuits can decode Dolby Atmos, DTS:X, IMAX Enhanced, Auro 3D and, for the first time, not that it excites us much, Sony 360 Reality Audio.

With seven channels of power (quoted at 7 × 100W into 8 ohms at full bandwidth, 0.08% THD), the Cinema 60 can power a 7.1-channel layout, or height speakers in a 5.1.2 layout, or even Zone 2 speakers with a 5.1-channel layout in one room and stereo in a second. There are two undifferentiated subwoofer outputs available.

The Cinema 60's powerful presentation is a reminder how much the audio soundtrack adds to a presentation, and how high-fidelity surround can transform a big TV into real home cinema. Whether delivering full-blown Atmos or upscaling something lesser to the full speaker complement, the Marantz delivered real impact and immersion to our 5.1.2 system, steering the effects and slamming the big blasts, but also able to convey subtlety in more delicate soundtracks and — crucially for our money — having the musicality to play music as well as movies, be they standard stereo or Atmos music from Apple Music.

Receivers need to be all-rounders, and the Cinema 60 nails that brief powerfully at a nicely-midrange $2600. ***marantz.com/en-au***

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Versatile, powerful and helpful, the seven-channel Cinema 60 delivers the complexities of a modern AV receiver in a user-friendly and musical package.

WINNER 2023 SOUND IMAGE AWARDS

Anthem AVM 90

JUDGES' COMMENT

Anthem's top AV preamp and processor delivers up to 15 channels plus four differentiated subwoofer outputs, along with a brilliantly versatile virtual input system and our favourite flavour of room correction.

The more often we have an Anthem AV product come to visit, the more we appreciate them. We particularly love the control system, available through a browser interface, and the ability to switch easily between separate speaker arrangements for movies and music at the drop of a hat, or to set automatic behaviour depending on the type of input the receiver senses.

We even love the calibration system, something we rarely say and even more rarely keep as our preference in general use. Anthem's ARC system comes with a high-quality microphone and runs on a laptop rather than the receiver itself, and it harnesses the Athena research undertaken by Canada's National Research Council to produce its results. When we flick between calibrated and uncalibrated sound, we find ARC actually improves things, rather than merely trying to improve things, as we find with a great many other such room-corrective procedures.

At $12,499 the AVM 90 is a high-end AV preamplifier and processor; it offers no amplification, so would be used either with a set of multichannel amps or with active home cinema speakers. It stretches up to 15 channels in a 9.4.6 configuration, and that's with four independent subwoofer outputs, so you might term this 19-channel capability, and it has full processing for Dolby Atmos, of course, also the currently lesser-used DTS:X, IMAX Enhanced, and all lesser Dolby formats.

The AVM 90 gives a generous seven HDMI inputs, all HDMI 2.1 (HDCP 2.3) supporting 48Gbps bandwidth for 8K/60Hz or 4K/120Hz pass-through. Gamers have support for Variable Refresh Rate (VRR) including both Freesync and G-Sync, as well as Auto Low Latency Mode (ALLM) and Quick Frame Transport (QFT). There are no fewer than three HDMI outputs — two mirrored and one independent Zone 2 output that is able to play a different source to the main room. All three outputs support eARC return audio.

There are four sets of analogue audio inputs at line-level plus a phono stage for a turntable, three optical audio inputs (and an output), and two coaxial digital inputs, though it has entirely abandoned legacy composite or coaxial video inputs. Wi-Fi or Ethernet networking enables music streaming.

We love the look of Anthem's gear, the big bold display and neat knobbery. We love the virtual inputs and how the speaker profiles can be applied to them. We are fans of Anthem Room Correction: both its implementation and the results it achieves.

All this makes the high-quality and effortless processing of the AVM 90 easy to implement, so that you can enjoy the highest levels of home cinema presentation.

Info: ***www.audioactive.com.au***

Yamaha SR-C30A

It has been a spectacular year for soundbars; we are recognising six of them here, although one is a returning former champion. Not so many years back we were barely recommending a soundbar at all — they were a compromise solution for those who didn't want real speakers in their home, and for many long years they invariably sounded like the compromise they were.

So it's a delight to find multiple approaches now achieving very listenable results. Yamaha was always a leader in the field, of course, with multidriver beam-forming soundbars, but in the last couple of years the Japanese company has also achieved remarkable results down at the very level where compromise usually kicks in. Last year we applauded the SR-C20A, a bar without a wireless subwoofer, which kept it priced way down, currently around $275.

But now we have the SR-C30A, which does bring a wireless subwoofer to work in concert with a compact bar similar but not entirely the same as the C20A (it drops the largest woofer). Yet it still keeps the price down to a near-miraculous $399, and can be found for less.

So we have a small black bar 60cm long and just 6.4cm high, making it fine to sit under the screen of most stand-raised TVs, plus a wireless subwoofer, also compact, with useful versatility in being able to either stand vertically at 34cm high, or to be laid sideways; it ports to the front and appears to fire to the right when standing, so positioning will be pretty versatile within those limits.

The bar is strictly stereo, with laudably few efforts to pretend that it's going to magically throw sound around the room; hence it doesn't support Atmos, just Dolby Audio covering Dolby Digital and Pro Logic II.

But inputs are surprisingly generous: HDMI ARC to play from your TV, plus not one but two optical digital inputs, an analogue input, and the wireless addition of Bluetooth streaming (SBC and AAC codecs available). There are four 'sound modes' very similar to those on the C20A, and similar adjustments.

As soon as sound emerged from the SR-C30A bar and sub, it was clear there was both roundness and depth to their sound. Indeed there was a little too much depth at first for the casual TV programming that we started with, but we found that the 'Bass Extension' was engaged. When we turned it off, the sound was simply suitably rounded. (Feedback for such settings is poor on the bar itself, but the app can show you what's what.)

What impressed us throughout was that we rarely had to do any button mashing to get a good sound. The Standard and Stereo settings, with Bass Extension off, provided clear and strong sound for pretty much everything. The C30A just rolled it all out with a nice balance, and could be lifted to a reasonable level too, while Yamaha's 'Adaptive Low Volume' kept things solid even at low levels.

We wouldn't recommend this as your main music system, nor is it going to rock a giant room with movie sound. But as a budget TV audio solution, the SR-C30A performs amazingly well. Info: **au.yamaha.com**

★★WINNER★★ 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Yamaha's SR-C30A combo produces competent subwoofer-supported TV sound at what is a nearly-miraculous price.

Polk MagniFi Mini AX

JUDGES' COMMENT

Polk offers an impressive subwoofer with a little lozenge rather than a wide bar, and the combo proved itself across both movies and music.

Polk has here delivered a rather different soundbar and subwoofer solution — although it's hard to call it a bar, really, when it sits like a little humpy at the centre of your TV. A TV speaker? A lozenge, perhaps? Let's call it an unusual sound lozenge and subwoofer solution.

The lozenge is remarkably small, just a ruler's length at 34cm wide, and at 8cm low enough to sit under most benched TVs. It offers three physical audio inputs: HDMI with eARC to connect with a similarly-equipped HDMI input on your TV, an optical digital input as a fallback connection for TVs with neither eARC nor ARC, and as a last resort a 3.5mm analogue minijack input.

Besides, there are more ways to play, thanks to the Polk's Wi-Fi connection. This enables AirPlay 2 and Chromecast streaming, while there's also Bluetooth, although no indication of any high-quality Bluetooth codecs, so use the Wi-Fi streaming if you're able.

In addition to the single oval 127 × 178mm (7 × 5-inch) driver in the subwoofer, the lozenge has a slightly unusual set of LCR drivers. The left and right channels each get a 19mm and a 51mm midrange driver, but the centre channel has only the one midrange driver. There are no upward-firing drivers, nor anything spreading the sound particularly wide, yet the bar is certified for both Dolby Atmos and DTS:X, and it also offers a '3D Audio Mode', claiming this "transforms stereo audio to 360-degree surround sound". Which is not usually our thing — yet see below.

The remote control is a welcome inclusion, sometimes omitted these days from even upmarket bars (we're looking at you B&W, overleaf).Not only that, but the remote has four sets of volume controls allowing tweaking of controls over main level, voice, bass, and even surround, though this last controls a pair of wireless rear speakers available as an upgrade option. We didn't have access to these during our review, a shame, really, as we'd like to hear how much better this MagniFi Mini AX could sound with that additional rear delivery. Because the delivery from just lozenge and subwoofer was great.

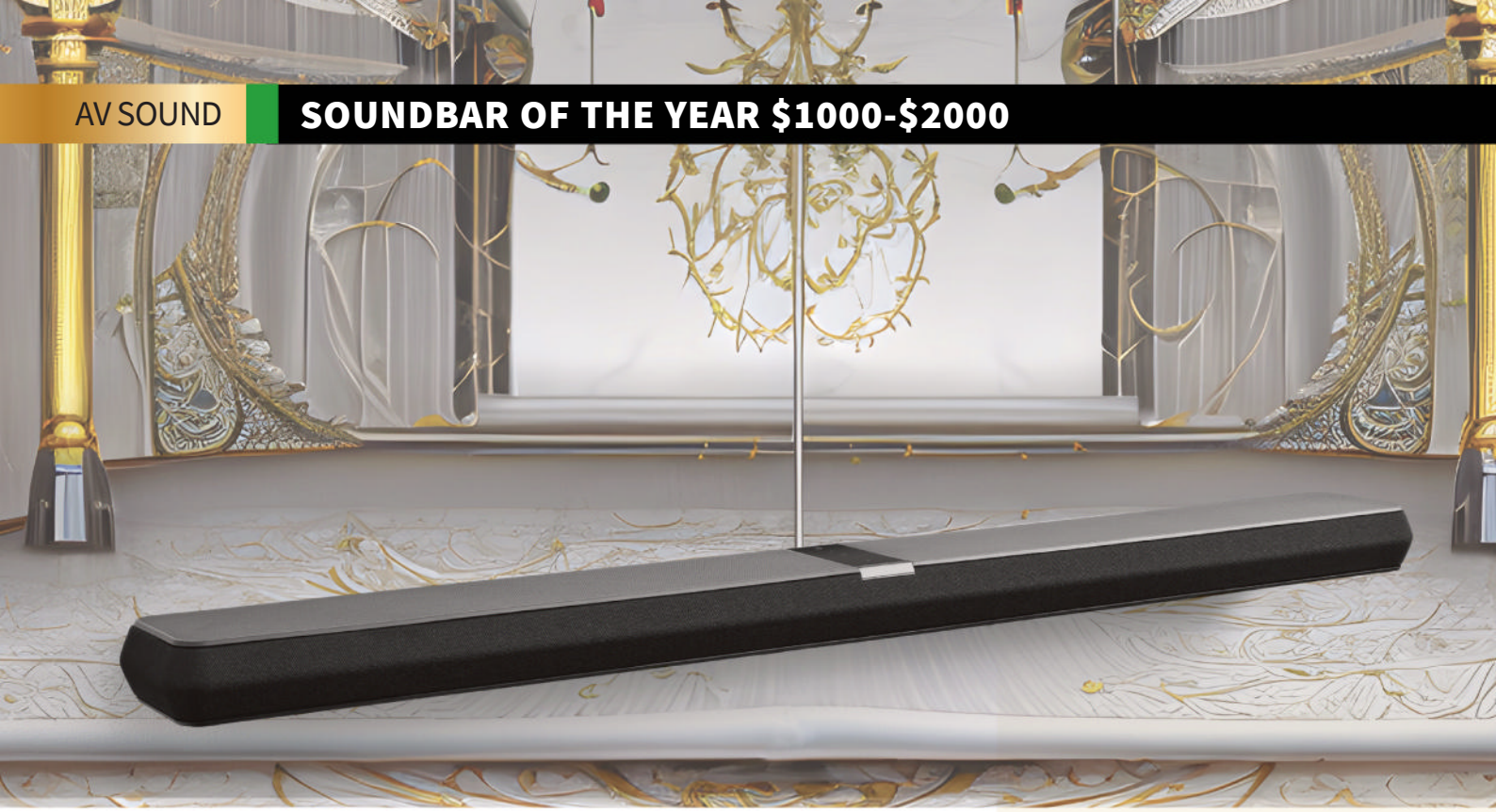
Polk's tall subwoofer is a movie monster; it shifts enough air to genuinely excite the room, and achieves weighty explosions and punchy powerful gunfire. Even a tone sweep moves cleanly from the sub to the lozenge without revealing any major holes or peaks.

The Polk pair also do some spatial magic. Whatever cunning processing Polk is relying on here, it does a remarkable job of expanding the soundfield without the usual caveat of destroying vocal intelligibility.

And as a not-insignificant final bonus, the MagniFi Mini AX proves a very good soundbar/lozenge for music listening. A great deal of music sounded highly enjoyable, the bass continuing to be a strength here as well, and the system could be taken really quite loud without the usual musical distress that soundbars get into. All this and Polk's economies of scale hitting a price of $799.

A final note: Polk has a range of MagniFis which have confusingly similar names for significantly different product. We can't vouch for the others: look for this one!

More info: **au.polkaudio.com**



Bowers & Wilkins Panorama 3

The $1599 Panorama 3 which arrived last year is less dramatic aesthetically than its predecessor: stylish rather than flamboyant, of which we rather approve, especially that the company has finally cottoned on to the fact that a mirrored top surface is a daft thing to put below a TV. The Panorama 3 is now matte on top, with a painted metal grille split by a horizontal control surface, and a taut fabric wrap all around its width, with angled corners at the sides.

These all play to the driver count, which includes upfiring drivers on a Bowers & Wilkins soundbar for the first time, with a pair of 50mm woven-glass-fibre cones on top towards the end, angled out so that they fire forward and up.

Along the front are three LCR channels, each with a 19mm titanium-dome tweeter and a pair each of the 50mm woven-glass-fibre cones. The left/right sets have their tweeters on the outside, the centre channel in the middle. Also on top, closer to the centre, are two larger 100mm low-profile bass units which deliver the bulk of the bass for this soundbar — because there is no subwoofer here, a big bonus in simplicity if the bar can make it alone sonically.

We make that 13 drivers in all, and it's a system that can play in 3.1.2 (crediting the two 10cm drivers as the 0.1-channel subwoofer).

The Panorama 3 requires just an HDMI cable to be connected to a TV socket which supports 'ARC' (the Audio Return Channel) or preferably 'eARC' (enhanced ARC). This will then send audio from the TV to the soundbar, and includes Dolby Atmos support. There is no support for DTS, with Bowers & Wilkins informing us that this is because there isn't any DTS available on any streaming service (which after investigation we determined to be broadly true).

The Panorama 3 is also a networked smart speaker, with Ethernet or Wi-Fi to enable Spotify Connect or the Bowers & Wilkins Music app to send it tunes; the app allows paid access to Tidal, Deezer and Qobuz, and free account-based access to SoundCloud, TuneIn internet radio, lastfm and NTS Radio.

There's also Bluetooth onboard, which allows direct streaming using SBC, AAC or aptX Adaptive. There is also Alexa, and not merely the ability to connect an Alexa Dot, but full Alexa built into the bar, so you can talk to the Panorama itself and enjoy all normal Alexa functionality, plus useful things like 'Alexa, mute' or 'Alexa, play Radio Northern Beaches', upon which it will do so.

Set-up was marvellously simple, and its bar-only performance was impressive, the Panorama 3 having an unusual ability to hold centre-channel dialogue rock solid for dialogue clarity (indeed the centre can sometimes seem a tad pushed) while making a powerful and wide delivery of music and effects. This serves music well also, especially with treble brought back a notch.

We recognise another bar around this price overleaf; this one scores especially for its solid sound without the need for a subwoofer out in your room. Together with plug-and-play operation, that makes the Panorama 3 a winner. Info: ***bowerswilkins.com/en-au***

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

This powerful bar-only solution from Bowers & Wilkins loads up on tech yet remains wonderfully simple to set up and use.

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Sennheiser's original Ambeo soundbar has new abilities and a reduced price, beating all newcomers to regain our top soundbar award.

Sennheiser AMBEO Max

This is slightly controversial... we reviewed Sennheiser's brand-new $2400 Ambeo Plus soundbar recently, along with the new $1120 Ambeo Sub. The pair in combination performed well enough, but its primary effect was to remind us how extraordinary was the original Ambeo soundbar, which was released three years ago, and required no subwoofer to support it, because it was massive enough to do an incredible job on its own. Indeed we didn't really understand why, given the subwoofer, the Ambeo Plus also needs to be so big. It sounds best with the sub, yet remains an oversized bar.

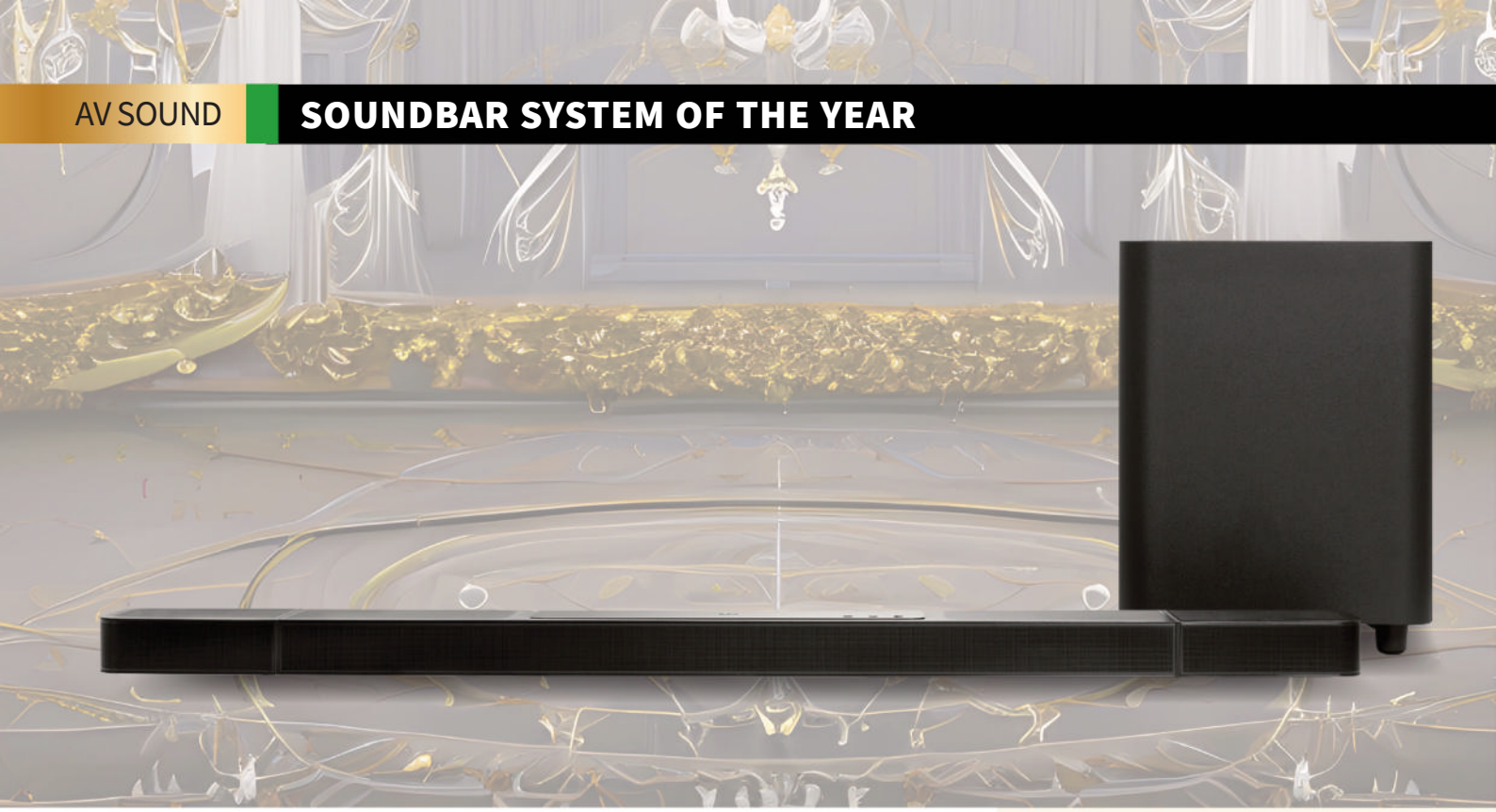
Meanwhile that original Ambeo bar has now been updated with the software from the new model, adding to its abilities significantly, and has been renamed the 'Ambeo Max'. And its price has drifted down from the launch price of $4000 to (on Sennheiser's own site as we write) $3199 — so significantly cheaper than the new Ambeo Plus with subwoofer. Our conclusion? We should be reminding readers about the original Ambeo bar.

So here it is, in its full enormous magnificence. Its development took Sennheiser years to perfect, its Ambeo team taking input from key Neumann engineers as well as its own, before settling on a massively solid brushed aluminium cabinet housing 13 drivers, the most obvious being the three LCR sets of 25mm aluminium-dome tweeter and twin 6×4-inch long-throw cellulose-sandwich cones. Two more tweeters sit in the angled ends, plus a pair of 3.5-inch upfiring drivers on top (though it curiously claims to operate in 5.1.4). The main thing to watch for is the bar's 14cm height, too high for many a benched TV, though fine if your screen is wall-mounted above.

There are a generous three HDMI inputs and one eARC-equipped output, with Dolby Vision and 4K passthrough. Meanwhile the new AMBEO-OS expands its eco-system with network support for AirPlay 2, Spotify Connect, TIDAL Connect, even Sony 360 Reality Audio, in addition to Bluetooth. It has app control and room calibration, and of course supports Dolby Atmos, DTS:X and MPEG-H.

And it will blow your little socks off. Other soundbars have since crept up to this price level and even gone above, but none delivers the extraordinary immersion, the most effective front-based wide stretch of sound we've heard from a bar, the sheer impact (including bass into 30s of hertz), the movie magnificence and impressive musicality of the Ambeo Max.

If you can fit a full speaker system into your entertainment room, please do so. If you can't, you won't get a huger soundbar sound than this now double award-winner. Info: ***sennheiser-hearing.com/en-AU***



JBL Bar 1300

Right on the bell of our awards judging, JBL's Bar 1300 arrived for review. With a price coming in a coin or two under $2000, it clashed within its category against the Panorama 3. But it has a trick which allowed us to separate it into this 'Soundbar System' category. Because while the Panorama 3 doesn't even bring a subwoofer to the party, JBL's bar brings not only a very large subwoofer but also true wireless rears, and Atmos-enabled rears at that.

The problem with wireless rear speakers is that while the signal may travel wirelessly, the power doesn't — each one needs a mains plug. But not here. JBL's rear satellites have internal batteries, which remain charged without much forethought because in normal use, the rear speakers attach to the bar itself. Normal viewing — one long bar up front. Special movie viewing — pull off the ends and put them behind you for what JBL calls 11.1.4.

Pull-off wireless rears were pioneered by Philips with its Fidelio soundbars, and the limitation has always been battery life, but here we found we could run the wireless rears through several movies at moderate to high levels before they needed rejuicing, and besides, you can plug any USB-C charger into them to keep them going. You can even take them off to the bedroom and use one (or both as a stereo pair) as a standalone Bluetooth speaker. How's that for versatility?

JBL's new range of bars are pretty plain and functional to look at, with unattractive flat black plastic areas between the grilled sections over drivers. Lower down the range where the drivers are fewer, the bars become plainer-looking still as the driver counts reduce and the flat black plastic fills the gaps.

You know what? Who cares. Soundbars should play to the ears, not the eyes, and plain black is just the thing to disappear below your TV, especially as the bar stands just 65mm high off a bench (a wall-mounting kit is also included) and is usefully matte on top, so won't reflect much of the picture above. JBL also sensibly opts for no lights on top (because you can't see them when you're seated, not that this discourages many other soundbar designers), while a big LED display shines from the front through one of the grilles. This is much better, especially as it confirms Atmos delivery (not always easy to achieve) with a big scrolling message on the front.

We loved the performance: it works well with day-to-day TV sound but Dolby Atmos soundtracks take things up a significant notch, the signals from the rears switching to plainly original sound, not ressed up from something less. The subwoofer is huge, its 10-inch driver delivering so much bass we frequently notched it down using the excellent remote control adjustments.

With AirPlay or Chromecast streaming via Wi-Fi, and set-up that just works, JBL has nailed an easy-to-use yet comprehensively equipped soundbar system that you can either fit and forget, or pull apart and play. Info: ***jbl.com.au***

WINNER 2023 SOUND IMAGE AWARDS

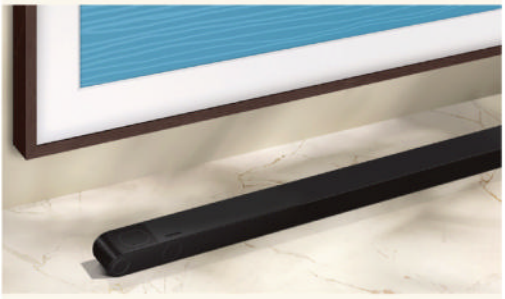
JUDGES' COMMENT

Pull off the ends of JBL's Bar 1300 and they become battery-powered wireless rears, or even standalone Bluetooth speakers. Put it all together with a generous subwoofer and enjoy true Atmos surround.

Samsung HW-S800B S Series

JUDGES' COMMENT

Samsung has had great soundbars ever since opening its Californian audio lab. But this one achieves an extra-ordinary slimdown of the bar without much compromising on either facilities or performance.



Just one more soundbar award, and while it muddies our recommendations around $1k a little, the judges decided they could not let this one pass by unrecognised.

So we're giving it a technical award. We wouldn't do this unless it was also an excellent performer, and you can have no doubt of that: indeed the subwoofer here is something of a star. Its bass descends to real depths, creating output from signals even below 30Hz, and it manages to sound not only resounding but astoundingly tight for a subwoofer doing so much from a cabinet so small. There's a moment 1:16 into *Jumanji: Welcome To The Jungle* where a deep chugging shakes a huge shed before a helicopter bursts through its timbers: the chugging not only had huge weight but stopped and started within each chugbeat, where many small subs deliver this simply as a pulsing blur.

But our technical award primarily recognises Samsung's achievement in doing what every soundbar maker has been trying to do since the start — they've made it small, or rather slim. Soundbars very often need to go below TVs, and anything more than 9cm height and they'll cover either the screen or the IR receiver or both. The S800B slims down the bar quite remarkably, so slim that we could close our forefinger and thumb around it; the cross-section is roughly a 4cm square. The bar is long, at 116cm — but since this matches a 55-inch TV nicely, it's unlikely to outscale a modern TV bench, and it certainly looks far less daft when wallmounted than do larger soundbars. (A full wall-mount kit and instructions are included with the S800B.)

We assume this to be another development from the Californian audio lab set up as part of Samsung Research America under Allan Devantier. The lab includes testing and measuring facilities that follow the tenets of the legendary National Research Council of Canada (see Anthem award) as developed by the equally legendary Dr Floyd Toole, and this is no coincidence, since Devantier worked with Toole at Harman (he moved over before Samsung bought the company). Ever since its MS650 soundbar, the lab's first, Samsung's soundbars have dominated the market, for once not because of the company's marketing power, but because they have been outstanding soundbars.

Still, such bar shrinkage was not without challenges. Samsung hasn't been able to fit in a proper HDMI socket. Instead it's got a mini-HDMI connector, with a mini-HDMI-to-HDMI cable provided in the box. And there are no other sockets apart from the power connection, so it's HDMI or the highway, no fallback optical or analogue input. But if that'll do for you, there are a great many features included, such as Samsung's SpaceFit Sound+ and Q-Symphony, which will work when used with a recent Samsung TV, control from Google or Alexa voice assistants, and Dolby Atmos, even wireless Dolby Atmos with a compatible Samsung TV.

The 'S' is for 'slim' or 'style'; it could equally be for 'sound', as the slimness hasn't compromised the performance. It's a great achievement. Info: ***www.samsung.com.au***

Sony HT-A9

WINNER 2023 SOUND IMAGE AWARDS

Soundbars have improved greatly in recent years. But they still can't compete with a set of matched speakers around your room, putting you truly in the middle of the action. But such speaker systems require a separate AV receiver, they take up a lot of space, it's hard to get them in the right place... and that's why we had soundbars in the first place.

Imagine, though, if you could have a very small AV receiver, transmitting wirelessly to a set of speakers that need be placed only roughly in the right positions. No centre speaker — they always get in the way, so four will do. Well, that's Sony's HT-A9 in a nutshell.

We can hardly begin to tell you how much we like this system. We've been recommending it like crazy, because it solves so many problems, and it sounds bloody brilliant. Each of the four attractive white Sony speakers is identical, around 31cm high with a 16cm circular cross-section, though this flattens at the back, making room for a removable section on the rear with both a keyhole hanging point and a screw-thread mount. Each is a two-way speaker firing out on the level, but with an additional upfiring driver angled from the top surface, firing from a flared cabinet opening. And the 'receiver' is tiny, like an AppleTV but a bit bigger.

If you investigate this system online, you'll encounter a lot of incomprehensible guff from Sony about 360 Spatial Sound Mapping. They postulate the creation of 12 virtual speakers which create a 360-degree soundfield... just ignore all that. It detracts from Sony's huge achievement here in delivering an easy-to-use, easy-to-install surround system using only four speakers (or eight, really, given the upfiring drivers) — and a subwoofer. You can get the HT-A9 for $2499 without a subwoofer, but we'd strongly recommend adding Sony's SA-SW5 subwoofer for another $900 or so.

After pretty intense investigation we decided that the 360 Spatial Mapping exists only to correct for badly-placed speakers — its calibration is designed especially to fix this. Not that you should place your speakers badly on purpose; the better your positioning, the less processing the system will need to do before delivering its profoundly successful presentation, a full room of immersive sound, especially persuasive with Atmos soundtracks and music. Only the upscaling of lesser material varied in its delivery, so that we found ourselves hunting for purity by mashing through the remote control's soundbar-style excess of processing options.

When in its purer modes, the HT-A9 is no less than a radical reinvention of living-room surround: teeny-tiny AV receiver, no signal cables (though six power cables including the sub), and a sound which is improbably fabulous for the price. We stand amazed. Go hear it. More info: ***sony.com.au***

JUDGES' COMMENT

We can hardly begin to tell you how much we like this system. We've been recommending it like crazy, because it solves so many problems, and it sounds bloody brilliant.

WINNER 2023 SOUND IMAGE AWARDS

Epson EH-TW6250

JUDGES' COMMENT

Epson's little projector comes with Android TV smarts inside and some key benefits of 4K, delivering great images at an attractive price.

Something has changed in the world of projectors, especially at the medium levels. Traditional projectors may be fairly smart with how they create light and send it to the screen, but they've been pretty dumb otherwise, requiring a source plugged in to their inputs, and some kind of external sound system to hear what's going on.

Hence projectors have traditionally been permanently installed and cabled up — and not many are the modern living rooms in which that's convenient these days, so that over the last decade bigscreen movie projection has moved more and more into dedicated cinema rooms.

In a bid to appeal more widely, projector manufacturers have started building in extras. Some have little sound systems, which are often pretty laughable compared to the bigscreen pictures being produced. More useful is the second evolution, which has seen first external sticks and now internal receivers which provide (usually) a built-in Android TV interface with apps, streaming content direct to the projector, no additional source required. *Voilà*, a projector which can work almost as well as an *ad hoc* visitor as it would if properly installed.

That's part of the appeal of this new Epson model, priced at an attractive $2099. The EH-TW6250 is smallish, clearly designed for ease of set-up and use. The mechanical lens controls are on the top and work smoothly. Frightened of lamp replacement costs? The brochure notes that the lamp should be good for 15 years if you watch one typical movie a day in Eco mode. There's only one HDMI input and an analogue audio output — unless you go looking, because there's another HDMI input and USB socket inside for the Android TV dongle. But connectivity is certainly straightforward.

Inside are three 15.5mm LCD panels with 1920 × 1080 pixel resolution. These are enhanced with Epson's '4K PRO-UHD' pixel-shifting technology. This is not the same as native 4K; the final resolution falls somewhere betweem 2K and 4K. The main advantage you get with UltraHD material is the projector's support for greater colour bit depth per pixel — which makes for smoother colour and greyscale gradients. With 24fps films you can have it all, but with 50 or 60Hz material there's a choice: 2160p/60 with regular Blu-ray-like colour, or 1080p/60 with higher resolution, more finely-graduated colour. We chose the latter nearly every time. The picture looked richer and smoother, and the 1080p/60 was as subjectively sharp as we could possibly want. Black levels were pretty decent for an LCD projector.

The AndroidTV is unusual in including Netflix; most projector companies are unable to offer this, Netflix having dragged its feet on projectors for years. Here there seems everything you'd get with, say, a Chromecast dongle with Android 4K, including the ability to Chromecast from other devices.

If we'd have guessed the price here, we'd have gone far higher. We'd still recommend an external sound system, but otherwise this smart-equipped Epson delivers great images at a great price. Info: ***www.epson.com.au***

AV PROJECTOR OF THE YEAR $2500-$5000

BenQ X3000i

WINNER 2023 SOUND IMAGE AWARDS

First up, this projector is larger than it looks! The $3299 X3000i measures 27cm wide and 26cm deep, yet its stylish cube looks kinda cool however you position it — right way up or upside down. Its abilities are pretty cool too. As with our previous winner this unit hides an Android TV stick inside, it has built-in speakers, and it's designed to be particularly easy to set up.

It has to be, because it was designed with gamers in mind. BenQ headlines it as a 'console gaming projector', part of the company's 'X' gaming series. And it has gaming features, yes, but it's equally suited to more general entertainment, coming as it does with consumer 4K resolution (or at least the DLP approximation of this), HDMI inputs, built-in speakers and that Android smart streaming interface for standalone operation.

But despite its friendly operation and appearance, this is a serious projector. The large cabinet gives it room to employ a 4LED light source, which adds a bonus blue/green LED to the previous 3LED ecosystem, thereby boosting brightness and colour luminance.

And it has the very latest in DLP projection technology, Texas Instruments' DLP650TE, which has new larger flipping micromirrors in its four-flash delivery of Ultra High Definition. So gamers may swoon for its bigscreen low-latency immersion; we were equally happy to load up a movie and kick back.

The Android TV stick offers great convenience and vast amounts of content, (though no Netflix here). But it does have a fixed 60Hz output, potentially an issue for 50Hz (Australian TV content) and even 24 frame-per-second movies. From Stan, a long pan across mountain ranges in the opening scenes of *The Summit* was notably juddery via the stick, but rock-steady when played via cable from the Stan app on an AppleTV 4K which was set to follow native frame rate. For external inputs the projector showed all frame rates correctly in the information pane.

Having said that, the projector seems quite adept at damping down 50 to 60Hz conversion, and the overall image was excellent. Colours were natural, yet full and vibrant; in the intro to *Gardening Australia* the greens and the range of greens were wonderful: bright in the light, dulled in the shade, with red and purple blooms pinging out of the foliage, detail and brightness beyond the price level here. Again an external sound system will help, but as a smart projector, BenQ's X3000i nails the brief. Info: ***www.benq.com.au***

JUDGES' COMMENT

This is a smart projector with good gaming credentials but also great TV and movie performance, with Android TV smarts plus detail, colour and brightness beyond the X3000i's price level.

Epson EH-LS12000B

We've seen what Epson can deliver down near the entry-level with the EH-TW6250. But that's almost a toy compared with what Epson can really do: this is a company that does massive imaging systems for museums, art galleries and entertainment venues. It's also one of the world's greenest and most sustainable companies — almost obsessed, it sometimes seems, but check any index of such companies and you'll always find Epson at or near the top. Good on 'em.

So this $8999 LS12000B projector sees Epson taking its home cinema performance to the next level, with high-brightness bigscreen images, realistic colours and excellent optimisation. It's a stunner in performance terms, but no compact tabletop projector — quite the beast, indeed, at 52cm across and 45cm deep.

Inside Epson has installed a large and high-quality light engine with a proprietary 15-element precision glass structure. The projector also gains an all-new Laser Array Light Source, using true multi-array laser diodes in a three-chip system that allows 2700 lumens of both white and colour brightness. The lasers confer far longer life than ye olde bulbs: 20,000 hours of full brightness operation is Epson's promise, and suffering no bulb-like fade-off in brightness on the way.

Is this a 4K/UHD projector? Genuinely so, it seems. Previous Epson '4K Pro-UHD' projectors (like the TW6250) have accepted a 4K input but deliver only half of the full count of pixels required for 3840×2160 consumer 4K. But the LS12000B promises the full 8,292,400 pixels, created by displaying four slightly separated shifts of a panel having native 1920×1080 resolution. It's still not native 4K, but it goes further than most.

There's also the natural advantage of Epson's 3LCD system in having three individual LCD chips continuously in action, so able to display 100% of any RGB colour signal for every frame all the time: no colour wheel to segment each frame into different colours over time (which reduces brightness). A proprietary 36-bit Epson ZX Picture Processor handles real-time colour, contrast, HDR and frame interpolation up to 120Hz. Finally, this being Epson, there is great attention to all-of-life eco features, including recyclability.

Suitable for much larger rooms, this is a magnificent projector, notably in bringing laser UHD delivery at a thrilling price. The price of its truly cinematic images is worth paying. More info: ***www.epson.com.au***

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

This is a magnificent home cinema projector, notably in bringing laser UHD delivery at a thrilling price, and a stunner in performance terms.

TCL RP630 Roku TV

Even accounting for inflation, this is the cheapest television we have ever featured in the Sound+Image Awards. The 55-inch 55RP630 has an RRP of $699; the 65-inch 65RP630 is $899 — and we've seen them even cheaper in stores. The 55-inch has proven so useful to us that it's now one of our references — a $699 reference TV! This choice was made partly because it's a reminder how good TV performance can be down at entry levels, but mainly because it's a Roku TV, and it seems to work with everything we plug into it. Its eARC recognises every soundbar we've tried; it picks up the model numbers of Blu-ray players and other sources even when we hot-plug them during testing. For us reviewers, such reliable compatibility allows us to better assess all manner of other products more reliably.

It's also incredibly fast. It turns on like a phone. Press 'on' and there's the home page. After the RP630, everything else seems slow.

Roku is the no. 1 TV streaming platform by hours streamed in the U.S., Canada, and Mexico. Its streaming boxes and sticks are wildly prevalent there, even having its own Roku Channel, with 'Roku Originals' and hundreds of free linear channels. But it's never come to Australia, officially at least, though some Telstra TV boxes were really Roku units inside. Now TCL is toying with it — they still only have two TVs — but we gather Roku may start branding its own TVs anyway.

Meanwhile, how's the actual TV? Obviously at this price it's not going to have the nits available for an amazing high dynamic range experience; the frequent scenes in Season 3 of *Ted Lasso* that have bright lighting behind silhouetted figures near burn your eyes out on the Samsung Neo QLED opposite; here the black and white detail is crushed back to something less extreme that the panel can handle. But there's plenty it gets right. It handles all streaming content natively — no juddering on 50Hz scenes during *F1: Drive To Survive*. It is Dolby Vision compatible, and even if it can't display it, you get the benefits of higher colour bit-rates. It did a great job with the detail and vibrant colours of Baz Luhrmann's *Elvis*; no limitation of the RP630 got in the way of this magnificent production.

Of course, you can pay more to get more. We're just amazed at how much you get here for the money. More info: **www.tcl.com/au**

★★WINNER★★ 2023 SOUND+IMAGE AWARDS

JUDGES' COMMENT

TCL brings a Roku TV to Australia, and we love it, from the smart interface to the marvellous compatibility. For the money, this is a brilliant bargain.

Samsung QN95B Neo QLED

Samsung's second generation of Mini LED TVs arrived with the weight of serious expectation on its shoulders. Can it improve on the already high standards we saw last year, when Samsung also won this award? What about OLED TVs? What about Samsung's own new QD-OLED tech? Well, there's no shortage of recommendations out there for OLED TVs, not only LG's , but also Samsung's own S95B which, along with Sony's A95K, introduced the new QD-OLED to the world, with its second-gen also imminent. But QD-OLED is front-emissive quantum-dot light rather than true front-emissive OLED; we're still making up our minds there. Meanwhile conventional OLED isn't always the best choice for our open Australian lounge rooms which are often broadly sunlit during daylight hours.

Whereas with Neo QLED, the quality is clear in all conditions. Last year we persuaded ourselves to back the 8K model, as it had some advantages over the 4K equivalents, although actual 8K viewing material wasn't one of them, and still isn't. New European laws and low sales may yet shut down 8K. So let's enjoy 4K.

Connections are a joy, thanks to Samsung's One Connect box (below), from which a single cable carries signals and power to the back of the TV. Samsung's TV interface and access to catch-up, Samsung channels, ambient modes and more are all great, even if its 'smart' connection system can be a nightmare for a reviewer constantly switching things around.

And the picture? It's a huge 'wow' if you use its Normal modes, blisteringly bright HDR peaks, thrilling colours. But its best trick is that you can pretty much leave it on Filmmaker Mode and everything looks great — not extreme, just great, like an amplifier playing loud with loads of headroom in reserve. That's what wins Samsung our gong. Prices are rather higher than opposite, of course — currently $3695 for the 65-inch, but with 2023 models announced, run-out bargains may be imminent. Info: ***www.samsung.com.au***

WINNER 2023 SOUND+IMAGE AWARDS

JUDGES' COMMENT

Samsung's Neo QLED TVs can deliver bonkers brightness, but their best trick is handling all manner of content without requiring adjustment.

Custom Installation Awards

Our Sound+Image GOLD Awards are reserved for the best of the custom installations which we cover in *Sound+Image*, *Australian Hi-Fi*, *Audio Esoterica* and *Best Buys Audio & AV* magazines, whether home cinemas, mixed purpose media rooms, stereo hi-fi installations, or an entire smart home decked in tech from its foundations to its roof-mounted CCTV cameras.

Custom installation approaches the audio-visual experience in an entirely different direction to our usual equipment-based system building. You’re paying for expertise and advice, and a good custom installer will begin with a consultation process where they get to know you, what you like, what you’re after, and eventually what your budget might be. Then together you can design the dream. Usually it will be the installer who recommends equipment: a professional installer has the knowledge, experience, and expertise to design and install a system that meets your specific needs and preferences. They can recommend the best equipment and technology to achieve the optimal audio and visual experience taking into account your room size, layout, and acoustics.

You can hone the details, decide where the drinks bar goes (sadly, outside the room is best), then let the professionals do the work before enjoying the results. The final advantage of using an installer comes with support and maintenance. If you have any issues with your system or need help with upgrades or repairs, you can rely on the expertise and assistance of your installer, and enjoy an ongoing relationship into the future.

OUR SOUND+IMAGE ‘GOLD’ ALUMNI

We deliver Sound+Image GOLD awards as a permanent status symbol to the companies that win them, recognising the quality of their work featured in *Sound+Image* magazine. So in addition to those recognised this year on the following pages, the companies here are also current GOLD award holders.

The CEDIA Connection

Our GOLD Awards are not the only place to find high-quality custom work. *Sound+Image* is proud to have been a founder member of CEDIA in Australia, and we still work with the global peak body to publish in print their annual award-winners for the Asia-Pacific region each year. The awards recognise the best work by CEDIA members, but equally important is that members undergo continuous education in skills and technologies, so that CEDIA membership is a badge of quality in itself. For information, visit: **cedia.net**

GOLD SOUND IMAGE AWARD

Andersons AVI

This home cinema room was designed as an integral part of a newly-constructed home on the Mornington Peninsula in Victoria. The owners were no strangers to the wonders of home entertainment, having enjoyed a number of high-end audio and video systems during the last 30 years, telling us that they "know what looks good and sounds great!"

Indeed this is their third dedicated cinema room, and the second which has been developed in conjunction with a team led by Alan Anderson of Andersons AVI, supported by Steve Spurrier of Studio Connections, distributor of Genelec speakers, and Paul Kutcher of Visual Fidelity, distributor of Stewart Filmscreen. This reunites the team which has won a previous award (see left) for a theatre which achieved a spectacular 60 degrees of screen immersion, where most home cinemas don't go much beyond 40 degrees.

The team clearly likes this immersive approach, as they've done it again here.

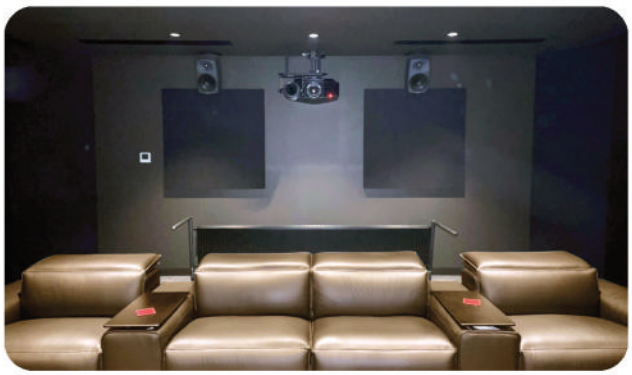
"The decision was made to go with a very wide 60-degree angle of view, with the screen some 4.5 metres in width," confirms Alan Anderson. "So it's a 175-inch diagonal."

Sony's native-4K VPL-VW870ES projector illuminates a curved Stewart Filmscreen Cine-V screen with a THX Ultra2 microperforated surface; the screen surface itself is Stewart's Ultramatte 150. Dropdown vertical masking is used for 16:9 display, which then yields a 140-inch diagonal image.

After an interesting 'Atmos or not' discussion, the team and owner settled on a 7.1 sound layout, with a Datasat processor/preamp feeding a full system of active speakers from Genelec, in a room treated with Ultrafonic acoustic panels and GreenGlue.

The result? "A special place for movies and big sporting events with family and friends," say the proud owners.

Info: ***andersonsavi.com.au***



GOLD SOUND IMAGE AWARD

Hi-Fi Hunter

This cinema space in a Perth home waited a decade and a half before being filled with a reference-level system... including vinyl. The owners, Darren and Sabrina, had a long-held dream of installing a state-of-the art home cinema, and even had a space reserved when their house was built some 15 years ago: a sunken double-brick construction usefully located at the back of the house, away from all the bedrooms — and the neighbours.

When the time was right and the budget available, their research led them to Perth's Hifi Hunter, and its director Josh Grondal. The planning stage took around three months as Josh and the owners discussed options.

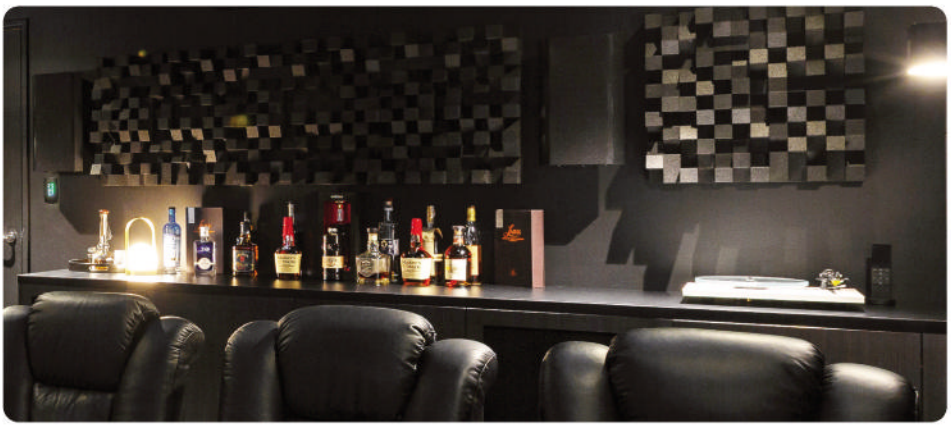
"The brief was to create a fully immersive experience," confirms Josh. "But not only from the equipment — it's far more than just the boxes in the room. Darren and I discussed the look and feel and the theme of the space as a whole, then we developed the ideas with the help of our interior designer."

The owners wanted the screen size as large as possible, but there was also equipment to fit on either side, with custom cabinetry to conceal the large AV racks with provision for their cooling and cabling, and also storage for the owners' Blu-ray disc collection. The decision was also made to optimise the system for the owner's two middle seats, since the other two would be used relatively rarely.

The system uses a 4K projector with anamorphic lens illuminating a 126-inch Cinemascope screen, flush with the front cabinetry and concealing Krix Theatrix LCR speakers — large three-ways with double horns and 15-inch bass units — as well as two of the system's four REL Predator subwoofers.

Sources for the system include a Panasonic 4K Blu-ray player, an NVIDIA Shield media player, 4K Foxtel, and one source which is unusual in a home cinema: a Rega Planar 3 turntable. This is connected to the home's Control4 audio distribution system, so their vinyl can be played through to speakers throughout the home. Nice.

"I could not be happier with the room," says owner Darren now. "There is not one thing I would change... I practically live in the room now." Info: ***hifihunter.com.au***



GOLD SOUND IMAGE AWARD

Rogue Home Cinema

This is a return appearancein our awards for Scott Rogan and Rogue Home Cinema, here for a space in a Western Australian home in which the owners — Anthony, Marisa and their three children — were already enjoying a multipurpose room with a Sony TV, Yamaha Aventage RX-A3080 receiver and Canton speakers, also a bar area, plus gaming via a full-size stand-up 'Street Fighter II' arcade game. Pretty nice — but the Rogue team set out to transform this room into an even more exciting space which would deliver a truly big cinematic experience.

After a planning period "connecting with their vision", it was decided to go from 65-inch TV to 4K projection, from 5.1.4 sound to 7.2.4... and from plain white walls to the designer décor you can see in these images, complete with redesigned bar, 'Easter egg' Scarface poster on the entry door, and Jamaican walnut doors for the Blu-ray library.

The sound system retained the Yamaha receiver, adding a four-channel Parasound ZoneMaster amplifier for Atmos height channels, also allowing the Yamaha to biamp the front L/R speakers, since music was important. A Control4 system gives them Tidal streaming as well as as a lighting control hub for more than 40 independent coloured lighting circuits and the star ceiling. And we were delighted to again see vinyl in the room — a spot-lit Audio-Technica turntable nestled in a vinyl hub to the left of the screen, with storage for the owners' vinyl records below.

The budget allowed for a Sony native 4K projector, while sources include Foxtel IQ, AppleTV 4K and a 4K Blu-ray player.

Together with provision for big-screen gaming to replace that Street Fighter II console, it all adds up to a multipurpose music, gaming and movie room designed with style and class. And sounding, says ScottRogan, "awesome! A huge amount of input and inspiration from the owners in a collaboration with us to find the perfect balance for this uniquely personalised cinema." Info: ***roguehomecinema.com.au***

Theory Audio Design sb25

Here we recognise a product outside our usual realms of consumer audio and AV. Theory Audio Design is a US company which emerged in 2018 as a sister brand to Pro Audio Technology, and when we recently auditioned a Theory system, the stars of the impressive performance were clearly the company's sb25 'surface-mount' speakers. These are designed to sit against the wall, or indeed behind a screen, mounting vertically or horizontally, with all manner of clips and screws for their universal bracket, plus a number of third-party stands available — ceiling ball mount, wall ball mount, a wall pan-and-tilt mount, even a ceiling pole pan-and-tilt.

Each sb25 speaker is a sizeable 55cm long (or wide) and 24cm wide (or high), operating as a two-way with a 36mm polymer compression driver and two 127mm (five-inch) carbon-fibre woofers. The sb25 speakers retail at $2299 each.

But you must, repeat must, also use one of Theory's loudspeaker controllers, which are amplifiers, but also versatile high-resolution digital signal processors, coming with Theory's 'Automator' software to set audio levels, delays, and signal routing, fully matrixed bass management within the system, and up to 20 parametric EQ points per channel. Pictured above is the ALC-1809, a $7999 unit which delivers three channels of 300W and six of 100W, all into four ohms, which is the rated impedance of the sb25s.

With subwoofer support and high-quality multichannel signals, the sb25 knocked us out with their reference performance in a medium cinema, and we suspect would do so in larger spaces as well. Their high sensitivity and whip-crack compression driver performance makes them sound like the movies, but the tightness of the bass and the clarity of the midrange make for a clean and accurately immersive experience. It's a very different solution, but the results are thrilling.

More info: ***www.audioactive.com.au***

WINNER 2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Dynamite versatile 'surface-mount' speakers matched with their own dedicated processor/amplifier.

Grado RS-1x

Brooklyn-based Grado's relationship with wood is as unequivocal, if not as famous, as Lego's is with plastic. The family-owned brand was only a year into hand-building its first headphones when, as the story goes, John Grado (son founder, Joseph) woke one night with the idea of creating a wooden pair, went downstairs, and started carving out what would become the RS1. More than 30 years after that first wooden Grado creation comes the fourth generation — the $1199 RS1x (confusingly the company lists the model number without a hyphen, but as you can see it has taken the trouble to carve a hyphen into each headshell, so we're including it here). In fact the RS-1x is the brand's first 'tri-wood' pair, using, specifically, maple sleeve, hemp core and cocobolo.

Wood, schmood, of course: the equally-important diaphragm is a brand-new 50mm X Driver with a more powerful magnetic circuit, a voice coil with decreased effective mass, and a reconfigured diaphragm. Add the company's classic circular foam earpads, antenna-resembling adjustment sliders, thin leather headband (here with white stitched edges) and a long cable (1.7m with a new grippy braided jacket), and the result is classic hand-made reference Grado: open, entertainingly lean and agile, and unfalteringly detailed. As ever with Grado, beware their out-of-the-box leanness; it took four evenings of playback for them to shed some of that unwanted crudeness and reveal their true talents as home-based headphones. ***www.busisoft.com.au***

Yamaha YH-5000SE

We confess that we've heard these only in pre-production form so far, but that, combined with the whole story here, was enough to secure this award for Yamaha's new YH-5000SE flagship headphones, which look back some 47 years to Yamaha's HP-1 in 1976, the headphones in which the orthodynamic driver made its debut.

It wasn't a new idea entirely, even back then, but it hadn't yet been successfully implemented: a speaker diaphragm that used isodynamic magnetic fields to drive an über-thin diaphragm etched with a conductive material. Yamaha called it orthodynamic; more commonly now we say planar magnetic.

Fast-forward four decades to 2016 and Yamaha's engineers, freshly targeting stereo with the all-analogue 5000 Series (see p41), decided to apply this design concept to today's more advanced manufacturing technologies and modern materials. Six years of development later, having tested more than 1000 driver diaphragm designs, they had a completely redesigned orthodynamic diaphragm driver, fit for a new flagship.

The YH-5000SE is a 'Special Edition' model, rather loftily priced at $7499 as a package "with nearly $2500's-worth of premium accessories" comprising a special aluminium headphone stand, two detachable silver-coated OFC-core cables with left and right channels individually braided, and two sets of earpads, one of highly-flexible perforated synthetic leather, the other in TORAY Ultrasuede. (The lone 'phone will follow at around $5999, we gather).

Perceived value is difficult for headphones to achieve after a certain price point, but the Yamahas felt so… light. And, well, that's because they are — they weigh just 320g. Nor did the YH-5000SE showboat with lusciousness you sink into, or bass levels that immediately correct your posture. They don't work to imprint any kind of spurious sonic character on you, yet the calibre of the Yamaha YH-5000SE's performance was abundantly clear: they just tell it like it is with a rare level of neutrality and transparency — one that reveals itself (and can be admired more and more) track by track. And that, really, is the most you can ever ask of a piece of audio equipment. Info: ***au.yamaha.com***

JUDGES' COMMENT

Six years of research and 1000 prototype drivers preceded Yamaha's release of its new flagship orthodynamic 5000 Series headphone, initially released in this Special Edition form priced at $7499.

Audio-Technica

ATH-M20xBT

In a significant contrast with the headphones opposite, these wireless Audio-Technica headphones can be yours for just $169. Yet they bring some heritage of their own, being consumer derivatives of a model made for recording studios — a path we find often yields extremely high-value products.

Audio-Technica has enjoyed great success bringing its weightier ATH-M50x headphones out of the studio and onto the street by adding Bluetooth (though not noise-cancelling) to their traditional cabled operation; now it's the turn of the lesser studio sibling, the ATH-M20x. Although really, in value terms the M20x is perhaps not lesser at all, its lower price making it almost more prevalent in studios, thanks to its combination of reliability plus remarkably accurate, large and spacious sound — all at a price which allow studios to bulk buy (the original non-Bluetooth M20x headphones can be found under $100).

Given that Bluetooth operation requires fitting chips, power and batteries inside the headphones, the first surprise is how light the new wireless headphones are, at 216 grams — just 26 grams over the non-wireless version. They do feel slightly lightweight; most of the moulding is simple black plastic, though they still have a solid steel headband adjuster. The sizable earcups host 40mm drivers with rare-earth magnets, and these deliver what we must declare to be wonderful sound for the money. As with the studio originals their sound is solid and spacious, well underpinned by pacy bass but with a wide and airy soundstage within which every instrument gets its due, while vocals are presented clearly.

There is one caveat to this performance — the sound is even better via the supplied 1.2-metre cable. But with some 60 hours of wireless playback, they'll keep the Bluetooth tunes pumping while away, ready for a cable upgrade at home. Absolute bargains these.

More info: ***audio-technica.com/en-au***

★★WINNER★★
2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

Audio-Technica's junior Bluetooth headphones bring their powerful studio sound to the street at a bargain price.

WIRELESS HEADPHONES OF THE YEAR UNDER $1000

Sony WH-1000XM5

No great surprise here to those that follow our headphone reviews — Sony's wireless noise-cancellers have been leaders since they first arrived, and this fifth edition just keeps nudging things up — including the price, mind you, so that we often suggest checking also the previous version, lest there's a bargain in the offing (the XM5 is currently $549, the XM4 $439 as we write, but we've seen even bigger gaps than that between versions).

Mind you, the XM5s are more of a rebuild than during previous iterations. Some changes we're not entirely keen on — there may be smoother sweeping lines and less aggressive edges, but a number of joints and hinges that allowed the XM4's earcups to fold foetally have gone and now they simply fold flat, like Bose's 700s, making them feel a bit more vulnerable, so the carrycase is now a must-use. And the driver has shrunk from the XM4's 40mm unit to a new 30mm carbon-fibre composite dome. Remarkably this doesn't shrink the sound or change its effortless musicality; indeed this latest generation has quite a jump in clarity, notably a new-found agility with bass frequencies.

The noise-cancelling has been tweaked as well, Sony bringing in the Integrated Processor V1 that first appeared on its WF-1000XM4 wireless earbuds. It has also upped the number of microphones used on the WH-1000XM5 to eight from four. And no more NC Optimiser recalibrations to interrupt your inflight movie: it all happens automatically on the fly now. The successful ear-cupping Ambient mode remains.

While you can still connect to two devices simulatenously (useful to have your phone interrupt your laptop with a call), Sony still hasn't added aptX to the Bluetooth roster, although there's SBC, AAC, and Sony's own LDAC, of course. (We note a high-res audio logo on top of the box, but this applies only to cabled operation; even LDAC can't get high-res through Bluetooth's meagre pipe.)

Battery life is still a substantial 30 hours with Bluetooth and noise-cancelling, 40 hours without NC. You can track how much is left in Sony's excellent control app.

Plenty that's new, with the best of the old: a winning equation. Info: ***www.sony.com.au***

★★WINNER★★
2023 SOUND IMAGE AWARDS

JUDGES' COMMENT

With plenty that's new, and the best stuff held over, Sony continues to deliver top-value wireless noise-cancellers.

Focal Bathys

WINNER 2023 SOUND IMAGE AWARDS

Soo to our final headphone award: wireless noise-cancellers over $1000. There's always a question as to whether it's wise to take expensive headphones on the road at all — but if you're up for it, we might recommend a listen to the first wireless headphones ever to roll out of French firm Focal. They're named Bathys after the Bathyscaphe, a deep-sea exploration submersible, Focal calling it "the embodiment of calm, depth and absolute silence," which might suggest a prioritising of noise-cancelling over music production. In fact they're better at the latter than the former: noise cancelling is good, but not up with that from Sony or Bose,. Yet the company has managed to retain the smooth warm and spacious tonal balance of its wired headphones. Their richness gives mids and lows in particular a welcome substance: bassline grooves can emerge profound and pacey. We like also that they contain a 24-bit/192kHz USB DAC which can thereby play high-res down a USB cable from a computer (cable supplied). Battery life varies from 25 hours to 42 depending on usage (highest is for USB use).

Our judges also wished known their continued regard for Apple's AirPod Max, which continues to astound them. But if you've got the extra budget to spare, check out also the Gallic charm of the newer Bathys.

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STABLE DIFFUSION 1.5, JEZ FORD

UWB, SCL6 & more

Bluetooth cannot transmit lossless high-res audio. Ultra-Wideband can. Will it change the world of headphones? Our Editor is intrigued, but cautious.

First up: can we please all agree that there is no such thing as lossless high-res audio via Bluetooth. Bluetooth just isn't fast enough to carry the required data rate.

Indeed we can simplify and say there is just no high-res Bluetooth full stop. For my money, high-res (by which I mean above CD quality) must be lossless to be genuinely high-res. Otherwise you're throwing away parts of the signal. And the whole point of high-res audio is not to throw stuff away.

A codec like aptX HD is not remotely high-res. LDAC at its Bluetooth best is lossy high-res. aptX Lossless can achieve lossless CD quality if your signal strength is very good (but certainly not through the new low-power LE version of Bluetooth). None of them can do high-res Bluetooth, because it can't be done under today's Bluetooth standards.

Don't get me wrong. All these codecs can sound great. Under demonstration circumstances they really can sound indistinguishable from CD quality and high-res. Sony's Chief Sound Architect once told me that their own engineers can neither hear nor measure the difference between upscaled 256k and true high-res, noting this referred specifically to files upscaled through Sony's DSEE upscaler, and that there were exceptions where music was particularly dense or complex. But for everything else, the implication was that high-res really is overkill. It revives that notion that the frequency part of high-res goes beyond the limits of hearing, so really what's the point? (High-res bit-depth, however, undeniably provides more useful detail.)

Hi-Res Audio & Hi-Res Wireless

But wouldn't it look great if companies could put a 'Hi-Res' logo on their wireless headphone packaging? This started happening around 2016 (it's what set off my conversation with Sony), and you still see these logos on wireless headphones. But whenever I read the fine print, or ask the question, the logo laughably refers only to listening through a cable, not wirelessly. Everything's high-res through a cable! But how many people buy wireless headphones with 'Hi-Res' on the box intending to use them with a cable?

So my view is that manufacturers really shouldn't put high-res or 'hi-res' on a box of Bluetooth headphones; it's borderline misrepresentation.

This has been further complicated (or potentially eventually clarified) by the Japan Audio Society creating a logo which says 'Hi-Res Wireless'. To be certified for

> "We'll not want to see a Hi-Res Wireless logo on Bluetooth headphones with SCL6, please, but go right ahead if the headphones have UWB capability and come with a dongle.

this logo, codecs must be capable of delivering frequencies up to 40kHz and supporting 24-bit/96kHz. I had always presumed that the criteria did not require these to be losslessly achieved, since LDAC and LHDC have been awarded this badge, and those are both ostensibly Bluetooth technologies. And for the same reason I'd assumed it covered Bluetooth products.

But two new recipients of the badge may now indicate otherwise.

SCL6, aka MQair

The two new transmission methods/codecs gaining the Japan Audio Society's 'Hi-Res Wireless' badge are LC3plus (from Fraunhofer IIS, the inventors of MP3), and SCL6.

SCL6 has recently emerged from the people who brought you MQA, which originally emerged from the people who brought you Meridian, which created the lossless compression used in Dolby TrueHD and DVD-Audio. So there's a good track record here.

MQA's SCL6 has hit the hi-fi headlines three times recently — firstly at its own launch in the UK, with demonstrations given to tech journalists up at MQA HQ. Then secondly because SCL6 will feature in newly-announced headphones from Paul Barton's PSB Speakers in Canada (under Lenbrook, with NAD and Bluesound).

Then hard upon all this, MQA Ltd announced it is going into administration while restructuring after losing its main backer, but hoping to find a new buyer on the back of SCL6. Which certainly explains why SCL6's original name of 'MQAir' was quietly dropped, and perhaps why SCL6 has been given such a buzz-generating airing recently.

What was the buzz? Well, SCL6 seems to deliver very efficient data compression over Bluetooth, down to perhaps 25% of the original bit-rate. From the stories initially written around SCL6 and the launch event, you might also have thought it was offering bit-perfect (i.e. lossless) high-res via Bluetooth.

But I doubt MQA said exactly that, because the maths belies it; the Bluetooth pipe is just not wide enough. It would require lossless compression twice as effective as anything before. I have a high opinion of Meridian's past efforts, but not that high! Any high-res audio through current versions of Bluetooth, including (especially, indeed) the new Bluetooth LE, must be using lossy encoding, throwing some stuff away.

This may not affect things. The decode at the SCL6 demo came out sounding great, I gather. But you're still trusting the encoder to throw away the right bits of your music.

While lossy for high-res via Bluetooth, however, SCL6 can most definitely be used for lossless wireless transmission. How? There were some crucial clues back on the launch pages of the PSB headphones and SCL6 itself.

Firstly: *"Developed by industry veteran and MQA founder, Bob Stuart, SCL6 ensures high-resolution sound even at low data rates."*

That's fine; no argument with someone claiming a better 'sound' at lower bit-rates. Heck, that's exactly what we're going to need if headphones start defaulting to the new awful-for-audio 'Bluetooth LE' which is rapidly gaining traction. (LE = Low Energy, always the priority for Bluetooth, but Low Energy = Low Bit-rate = Low Quality Audio.)

But then this description of SCL6 on MQA's site: "*the technology supports both MQA and PCM audio up to 384kHz, and the encoded data rate can be scaled seamlessly from 20Mbps to below 200kbps, covering Bluetooth, Ultra-Wideband (UWB) and WiFi links.*"

So there's the crucial information — for high-res SCL6, you'll need up to 20Mbps bit-rate. Uncompressed stereo 32-bit/384kHz is 24.6Mbps, so at the top end of SCL6 the compression certainly seems minimal, and it could work losslessly with no problems.

But not through Bluetooth, no way! Nobody manages more than 1.5Mbps through Bluetooth in the real world; 1.2 to 1.3Mbps is the target for aptX Lossless to achieve lossless CD quality, says Qualcomm's Snapdragon team, though it will drop to lossy lower levels in a busy wireless environment (which is pretty much everywhere these days).

So Hi-Res Wireless — how?

As the MQA page says: by scaling to Ultra-Wideband (UWB) and Wi-Fi links.

Wi-Fi has been tried many times on headphones, right back to the days of Kleer on Sennheiser's early digital wireless TV headphones (such as the marvellous RS180). Even back then it could do CD quality.

But Wi-Fi is power-crazy compared with Bluetooth; Wi-Fi headphones wouldn't last the day, and if your phone is sending the Wi-Fi, nor would your phone.

So Wi-Fi, by today's standards anyway, is no good for out-and-about mobile music, and has limited use even in the home.

UWB: Ultra-Wideband

Which leaves — drum roll... Ultra-Wideband. UWB ticks the boxes: it's low power, yet it can achieve a higher bit-rate than Bluetooth.

Loads of phones are already using UWB: iPhones 11 through to 14, Pixels 7 Pro and 8 Pro, and a host of Galaxys have UWB in them. But UWB is used in those phones for accurate location finding, because UWB is able to accurately time how long signals take to get places, giving actual distances between devices, something Bluetooth can't work out. (Also potentially notable in the longer term, UWB is banned in a few countries, lest it interfere with other pulse-based technology: currently this list comprises Armenia, Azerbaijan, Belarus, Indonesia, Kazakhstan, Kyrgyzstan, Nepal, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. Amend your holiday plans accordingly.)

So if UWB is so great, why has it never before been considered for headphones?

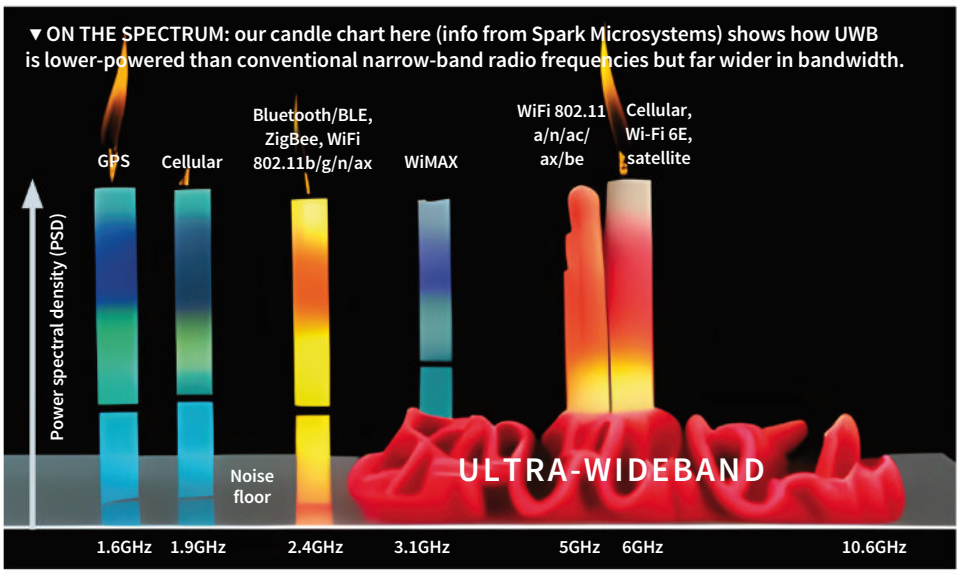
Because of body blocking problems. This is common to the other bands as well, whether sub-gigahertz, 2.4GHz (Bluetooth), or 5GHz (Wi-Fi). Other things block wireless frequencies too, but for headphone use, it's the body-blocking effect that has scuppered UWB as a useful frequency upgrade.

AntennaWare & BodyWave

Enter AntennaWare. Regular readers may recall this company from #348 of *Sound+Image*, when we interviewed Jonny McClintock, formerly Commercial Director of aptX — he saw aptX's codecs from their beginnings at Queens University Belfast, all the way to becoming part of Qualcomm.

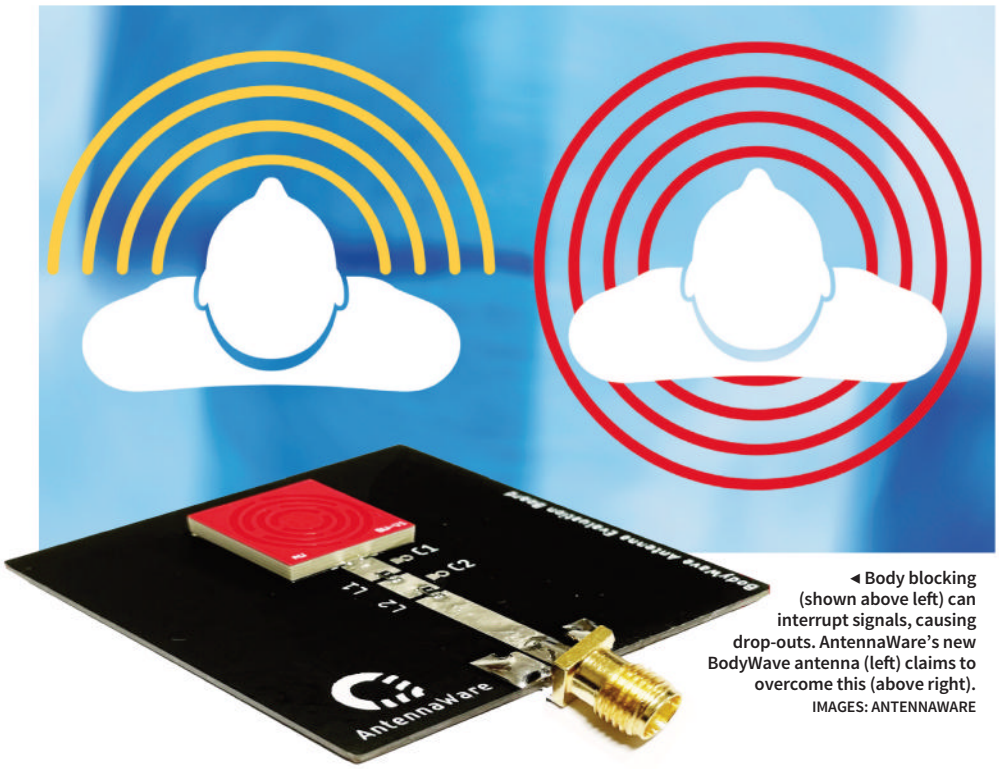
Funnily enough, AntennaWare originates from the same university, Queen's University Belfast. And Jonny McClintock is now its Commercial Director.

"I listened to their pitch of claiming up to 20dB of improved RF performance for body-worn applications," he told us, back in mid-2022, with apologies for revisiting



▼ ON THE SPECTRUM: our candle chart here (info from Spark Microsystems) shows how UWB is lower-powered than conventional narrow-band radio frequencies but far wider in bandwidth.

STABLE DIFFUSION 1.5, JEZ; INFO SPARK MICROSYSTEMS



◂ Body blocking (shown above left) can interrupt signals, causing drop-outs. AntennaWare's new BodyWave antenna (left) claims to overcome this (above right).
IMAGES: ANTENNAWARE

the interview. "At the time, I knew that there was an issue related to body blocking, which results in glitches. This needed to be addressed in either a longer buffer size — reducing the possibility of real time applications — or by better RF topologies.

"Initially AntennaWare's founders were looking at medical and automotive use, but I thought there had to be a benefit in audio, specifically for real-time applications, and perhaps digital wireless microphones, where glitching is the singularly the worst sin that can be committed."

The AntennaWare product is called BodyWave, 'the only antenna specifically designed for wearables'. This new antenna is what makes it possible for UWB to be implemented in headphones, achieving a higher bit-rate, and so potentially allowing a codec like SCL6 (but also others) to deliver true high-res wireless. Presto — a potential new age for audiophile wireless headphones.

Do you need BodyWave in both the transmitter and the headphones to get the benefit?

"Both transmitter and receiver can benefit from supporting BodyWave," Jonny explained, "but there will be improvements even if only one end supports BodyWave. I suppose this is one of the major differences in the challenges of deploying Bodywave versus aptX."

We asked about power consumption: body blocking is traditionally addressed by upping the power to get the signal through reliably. Will AntennaWare use more power?

"There are power restrictions for both health and battery reasons," he said. "Adding BodyWave can either keep the existing power consumption figures and improve performance for robustness or distance, or deliver the same performance with a longer battery life."

He was less forthcoming about precisely how BodyWave works. Waves go best around objects when their wavelength matches the object they're going around. For human dimensions that would put the waves down around 300 to 1000Hz — that's audio territory. But this clearly doesn't fit the UWB technology here, so how is BodyWave getting far smaller wavelengths to follow the surface? The answer here was brief.

"Now we're wandering into the IP of BodyWave which really only should be discussed under an NDA," he replied. (And darn, I don't sign NDAs.)

It's important to note that BodyWave does not in itself provide more bandwidth. But it will ensure that in a harsh and busy RF environment, audio won't drop out, which enables the previously problematic UWB to be used for audio.

Spark Microsystems

Another company in the UWB space is Spark Microsystems, a Canadian semiconductor company specialising in next-generation ultra-wideband. I was contacted (rather too briefly) by one of their engineers who had read a UWB piece I'd published on *whf.com*. 'Love your newsletter!" he said, "Check out Spark! This is where it's happening!"

Spark has a family of chips that use UWB to transmit data rates up to 10Mbps, and their demonstration headset achieves uncompressed CD quality and better; indeed at CES 2023 the headset was being used for demos of uncompressed 96kbps high-res transmission.

It also explains why its "patented SPARK UWB radio doesn't interfere with other narrow-band radios such as Wi-Fi, BLE, Zigbee, Z-Wave and cellular bands" (see the chart opposite), explaining the fundamental differences between the impulse-based stream of UWB data, as compared with the modulated carrier frequency which is the basis for most narrow-band radio. With no such reference carrier to be established between transmitter and receiver, UWB link initialisation can be far more rapid, while it also uses lower transmission power for a comparable signal, and achieves much improved latency: Spark's chipsets promise between 3ms and 5ms audio latency.

Hence the company also sees its UWB technology as being highly applicable to gaming (it had a UWB mouse at CES), and of course to VR, ER and AR headsets. We gather that Swedish watch innovator Platonum has chosen Spark's UWB technology for the company's first series of 'Deep Augment' smart watches.

For audio applications, meanwhile, Spark says UWB offers higher data rates and better robustness than other short-range wireless solutions, ultra-low latency when playing games or watching videos, imperceivable delays on conference calls, and — because of the lower power operation — longer listening times and less charging.

I've asked Spark about actual product lines beyond the watch, about how they overcome body blocking, and more; nothing has come back by press time, so watch our upcoming *Sound+Image* news for any updates on the intriguing Spark UWB ecosystem.

Those PSB headphones...

So let's circle back to those forthcoming PSB headphones (which Mr Barton himself, of PSB, informs me are still "a ways off", and company representatives have since indicated they won't be arriving until at least 2024).

Now we see that it's not so much SCL6 which is of interest here; that's almost a distraction. SCL6 claims to sound better at low bit-rates, but it doesn't help in itself to achieve the required jump in bandwidth. MQA did confirm this to our UK team when they went back and asked, telling us that SCL6 will (at best) do lossless 16-bit/44.1kHz through Bluetooth. Even then it moves into lossy territory if the connection cannot sustain data rates of at least 700kbps. Which shows the efficiency; we note a picture taken at the launch showed a 24-bit/88.2kHz file (originally 4233.6kbps) being reduced to 25.78% of its original size, for an average data rate of 1091.4kbps, a peak of 1111.5kbps.

So you might just squeeze that through a perfect Bluetooth connection, but it's sure ain't lossless. High-res lossless is still off the menu via Bluetooth using SCL6 or anything

else. But those PSB headphones will have more than Bluetooth. The magic pill here is UWB, and the enabler of UWB is BodyWave from AntennaWare.

We've heard from Mr McClintock specifically on the PSB headphones.

"Yes it's UWB that provides the magic for data throughput," he confirms, "and it can support 24/96 linear PCM, no compression. UWB unfortunately is subject to detuning when placed close to a body, human or otherwise, so it's AntennaWare's BodyWave that addresses this problem and enables UWB to deliver what it promises."

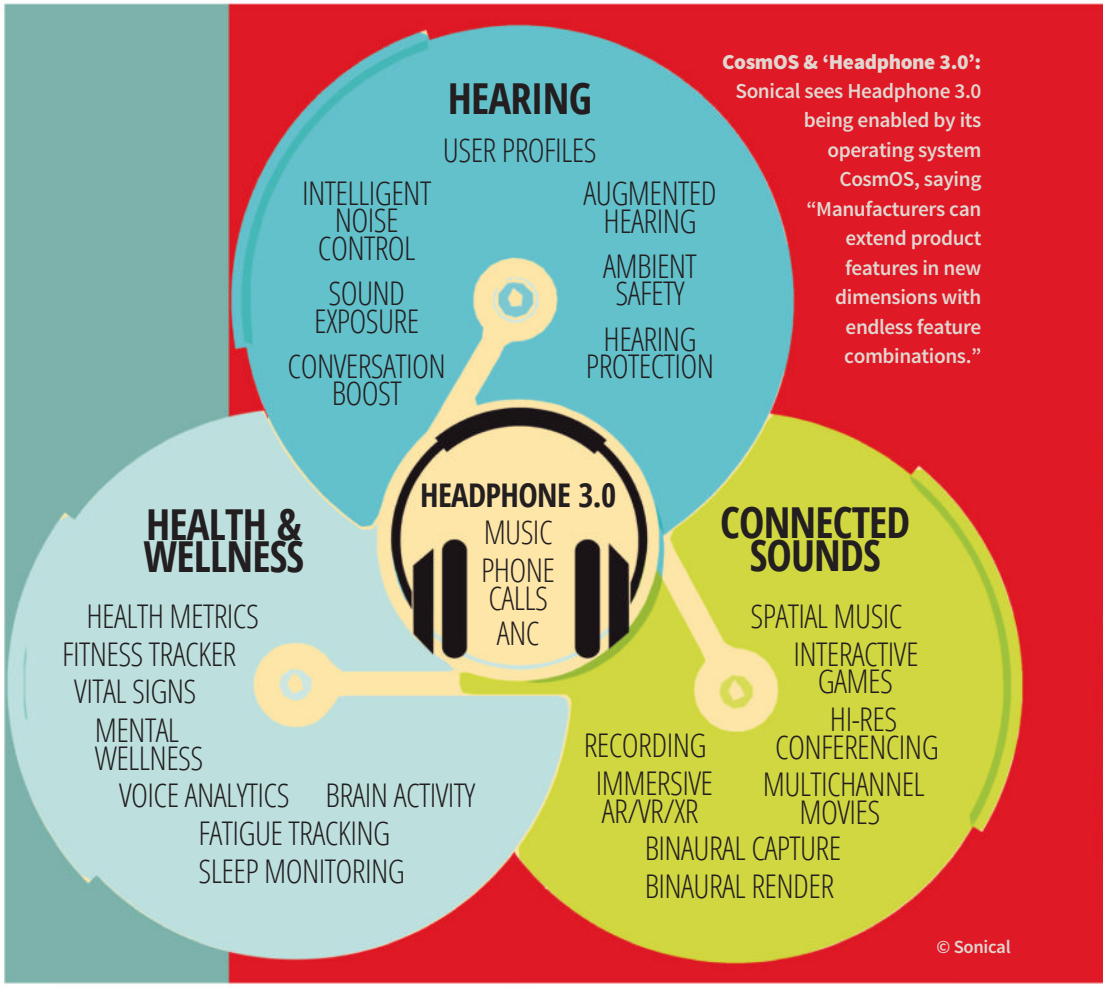
Note 24/96 'PCM', no clever codec required. With more bandwidth, any codec might go higher, so long as it's built to allow a higher-res input.

So I'm guessing this is what's behind Japan Audio Society's 'Hi-Res Wireless' logo: it's being awarded to codecs (not products) which can stretch to 40kHz if they have the bandwidth available, and that doesn't have to mean Bluetooth. That would then make sense of their inclusion of Fraunhofer's LC3plus, which is entirely a non-Bluetooth codec.

If that's what they do mean, then they might make it far clearer for consumers (and the likes of me), and also forbid the use of the logo on any products which don't have the technology to deliver it. SCL6 may qualify for the logo, but SCL6 doesn't automatically make a product Hi-Res Wireless — any more than aptX Lossless through Bluetooth LE will ever actually be Lossless, which is another story. We were rather shocked when a colleague returned from a Qualcomm event with news that aptX Lossless would run on Bluetooth LE, which would seem to have nothing like the available bandwidth to get it to work losslessly. When we enquired, Qualcomm's response was: "We enable lossless over LE Audio by bringing in the end-to-end optimisation of Snapdragon Sound to drive up the data rate and then running aptX adaptive including the aptX Lossless codec." Mmm, yeh, but no.

We already know that aptX Lossless can spend a lot of time being non-lossless without you ever knowing (except by the sound), so we suspect that's how it'll go via Bluetooth LE as well. If it's called 'Lossless' you might hope it was actually lossless, rather than merely lossless-capable, but I guess Qualcomm doesn't want an asterisk on its codec names.

The same goes for SCL6. We'll not want to see any Hi-Res Wireless logos on Bluetooth headphones with SCL6, please, but go right ahead if the headphones have UWB capability and come with a dongle.



CosmOS & 'Headphone 3.0': Sonical sees Headphone 3.0 being enabled by its operating system CosmOS, saying "Manufacturers can extend product features in new dimensions with endless feature combinations."

▲ We have no idea what either a UWB dongle or PSB's final headphones ("a ways off") will look like, so the M4U 2 design is shown here on the right with their notoriously large headshells, which might prove to be just the thing required to hold all the new tech required for CosmOS and UWB. We loved the M4U 2; it was a Sound+Image award-winner.

Back to dongles

A dongle? Yes, it's all very well for PSB's headphones to have UWB and BodyWave within them, but how will anybody send them a UWB signal? Our phones and tablets and laptops aren't made for that; nor is pretty much anything else.

The answer seems likely to be something else which hasn't been mentioned in the advance publicity — a dongle. Remember them?

"The UWB encoder will have to be supported most probably via a dongle," Jonny McClintock tells us. "This is all a bit reminiscent of the early days of aptX and Bluetooth where Sennheiser were first out of the blocks with a dongle. It's where it starts before appearing natively in source devices."

He is, he says, "comfortable with the journey that is front of me…"

And so he should be. He's also closely involved with US company Sonical, and its radical CosmOS platform which "puts a computer in your ear" and envisages a world of headphone apps operating under the inspiring catchphrase 'Headphone 3.0'. We had lots more about Headphone 3.0 in that earlier *S+I* interview, and some of that went online (you can read it here: *tinyurl.com/headphone3*).

The new PSB headphones are also the first planned to use this CosmOS 'Headphone 3.0', alongside UWB and BodyWave.

If these technologies succeed, and I certainly wish them luck, they could presage a genuine upgrade to what high-res fans have been seeking for so long — real low-energy lossless high-res wireless, without compromise. ┼ *Jez Ford*

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TIM SACCENTI

METALLICA *72 Seasons*

Musical intensity meets personal tumult on 2023's most anticipated metal.

The release of a new Metallica album is a huge event these days. With it comes anticipation and expectation from a demanding fanbase, some of whom perversely seem to relish the possibility of being disappointed.

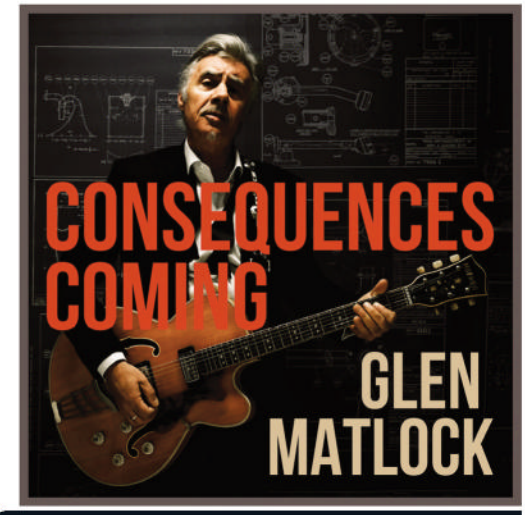
The 11th studio album won't disappoint anyone but the most truculent fan. '72 Seasons' follows the road map drawn up by 2008's knotty 'Death Magnetic' and 2016's 'Hardwired…': titanium-plated modern metal fuelled by a relentless intent to be better, louder and sharper than anyone else.

Stellar lead single *Lux Aeterna* was greeted like a long-lost son by the faithful. With its turbo-charged, old-school thrash feel and NWOBHM-referencing lyrics ('Lightning the nation' indeed), it felt like a deliberate callback to the band's 1983 debut 'Kill 'Em All', suggesting '72 Seasons' could find Metallica on a nostalgia trip through their own past.

In reality, it's anything but. '72 Seasons' is way denser than *Lux Aeterna* indicated. It's an intense album, one that goes hard for virtually every second of its 77-minute running time. The jagged opening title track floors the accelerator from the off, James Hetfield machine-gunning out terse, vivid lyrics: 'Wrath of man/Leaching through/Split in two.' The furious *Shadows Follow* and *Screaming Suicide* belie the band's years (Hetfield and drummer Lars Ulrich turn 60 this year; guitarist Kirk Hammett has already passed that milestone), while *You Must Burn* arrives like a juggernaut, riding in on a hulking groove that sounds like a bulked-out *Sad But True*. That intensity is deepened by Hetfield's lyrics. The singer has had his share of personal turbulence lately and he's uncorked a bottle of turmoil here. His lyrics, never exactly happy, are tormented and bleak. 'So tight/This crown of barbed wire,' he snarls on *Crown Of Barbed Wire*.

'72 Seasons' isn't an easy listen; it demands work. Ballads are absent and even big melodies are scarce, though that ensures they're all the more striking when they do arrive. Jamming the slow-burning, 11-minute *Inamorata* on the end of an album that's already passed the 60-minute is the work of a band seeing how far they can push things. Quite far, it turns out — *Inamorata* is one of the best songs on the album (it also ends with a much-needed chink of light lyrically).

The days of Metallica raising the bar with every release are long gone. That's someone else's job these days. Metallica's concern is making the best Metallica album irrespective of what's going on around them. On that score, 72 Seasons is a ringing success. *Dave Everley*



GLEN MATLOCK

Consequences Coming

Passionate pop polemic from ex-Pistol.

'I gotta get this out there!' Glen Matlock sings on stirring opener *Head On A Stick*, and the album almost brims over with rage at a world seemingly gone mad in the wake of Brexit and Trump's election. Not that the debonair Matlock — currently moonlighting as touring bassist with Blondie — ever loses sight of the need for a melodic counterpoint to such righteous fury. *Speaking In Tongues* is a bluesy broadside at political double-speak, while the title track is a propulsive musical told-you-so in which he announces: 'You ain't ever gonna cramp my style.'

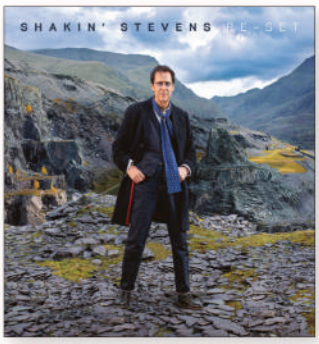
Elsewhere, *This Empty Heart*, *Can't Be Myself With You* and a heartfelt cover of kd lang's *Constant Craving* suggest severe emotional turbulence, too, culminating in cathartic finale *This Ship*, where he declares: 'This train is rolling down the track.'

In a world of ersatz entertainment, Matlock is a rock'n'roll troubadour to the end. **Paul Moody**

SHAKING STEVENS

Re-Set

Guess we're not in this ol' house any more...



Now hurtling towards his 80th birthday, singer Shakin' Stevens — who, lest we forget, regularly played Communist Party benefits in his early days — is undergoing a remarkable renaissance in the winter of his career. 'Echoes Of Our Times' (2016) was a distinctly British take on Americana. On new album 'Re-Set' he's more sparse still. Guitars twang (*May*, a tribute to his mother, glides like the Twin Peaks theme); *George* is done with just voice and piano; *Tick Tock* grapples with climate change; *Dirty Water* channels Tom Petty. Perhaps best of all, the angry, hoarse-voiced *Beyond The Illusion* links the forced emigration of 18th-century Cornish miners with contemporary refugee displacement. It wouldn't be out of place on a Levellers album. It's a mystery why he's waited so long to blossom; the Top 10 hits began to dry up after 1985's *Merry Christmas Everyone*. If only he'd taken this direction then. **John Aizlewood**

ANDY WHITE & TIM FINN

AT

A follow-up to ALT's 'Altitude' album of 1995.

Andy White (solo artist/sometime Peter Gabriel co-writer) and NZ legend Tim Finn reunited (the 'L' of ALT was Hothouse Flowers founder Liam Ó Maonlaí, who elected to pass here). The pair bounced tracks between home studios then sent the files to ace producer John Leckie (who'd worked with White before). Leckie surprised them by using pretty much everything to create fabulously rich textures.

Laden with hooks, in places it plays like an echo of the album 'Finn', made with his brother Neil in 2004. It's quirky but never twee, cleverly delivering protest (as on *Three Sheep Grazing*, surely the first use of 'contented herbivores' in a lyric) and politics (*Happiness Index*) before ending on *Rock N Roll Star*, a witty pastiche of Bowie and Bolan. **Neil Jeffries**

DEPECHE MODE

Memento Mori

A post-Fletch Mode channel grief into deluxe autumnal electro-blues.

A sombre landmark for Basildon's stadium-rocking techno-pop titans, 'Memento Mori' is the first Depeche Mode album without Andrew 'Fletch' Fletcher, who died suddenly last year. Recording began before Fletch's passing, so it would be fanciful to extrapolate too much from that funereal title. Mode albums typically come in 50 shades of deluxe misery, after all.

But this is unquestionably an autumnal, brooding, late-career affair with a deliciously rich, echo-drenched, electro-classical production (it was co-produced by Marta Salogni, whose previous credits include Björk and M.I.A.).

While Dave Gahan and Martin Gore tap into their A-ha side on the chiming synth-pop gem *Ghosts Again*, soul-weary melancholia is their default setting on dreamy, swooping epics like *Speak to Me*. The best of Gahan's clutch of co-writing credits is *Before We Drown*, a slow-building crescendo of aching angst. Gore also surpasses himself with his mandatory solo crooning cameo, sparkly avant-lounge ballad *Soul With Me*, sounding like Scott Walker with a dash of Val Doonican. Lavish production disguises thin songwriting on a few of the tracks, but overall this voluptuous sonic feast feels like a fitting epitaph to departed friends. **Steven Dalton**

VINCENT GUIGNET

THE DAMNED *Darkadelic*

Loud'n'lively twelfth from punk's most adaptable survivors.

"It's always been a great adventure, for so many years' Captain Sensible sings on *Bad Weather Girl*, two tracks into 'Darkadelic'. The song is ostensibly about the unpredictable climate through which The Damned have traversed these isles over the past five decades, but it could also be taken as a measure of their sheer staying power. They've endured, and flourished, when most of their punk peers have long-since withered.

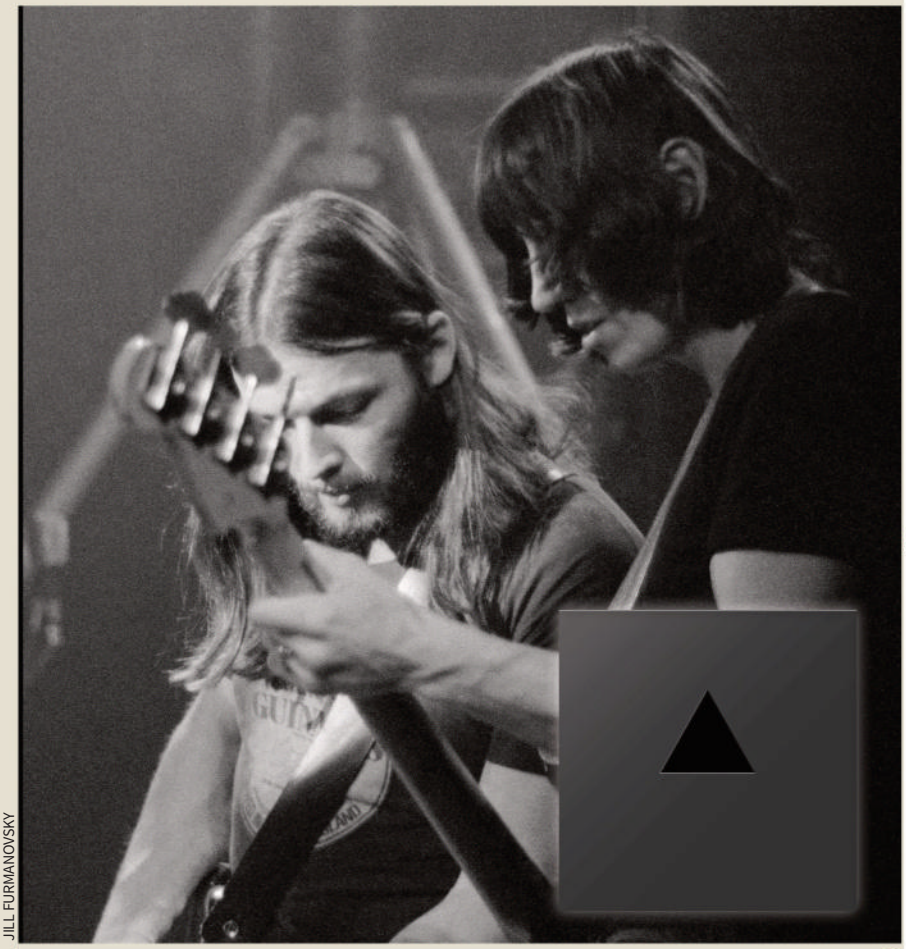
The original Damned line-up reunited for some shows at the end of 2022, playing together for the first time in 20-odd years. That's where the nostalgia ends, though. The new-look Damned (touring Australia in June) is original members Dave Vanian and the Captain, plus long-time ally Paul Gray on bass, keyboard player Monty Oxymoron and new drummer Will Glanville-Taylor, and they already had 'Darkadelic' in the can by closing night, squaring up to the future just as they drew a line under the past.

'Darkadelic' is no dramatic reinvention — this is most certainly a Damned record — yet it carries enough fire and youthful zest to suggest fresh purpose. It certainly rocks harder than 2018 predecessor 'Evil Spirits'. At the same time, naturally, it carries echoes of the band's catalogue, particularly the early-80s transition from post-punk subversion to gothy psychedelia. Nothing encapsulates this better than *Wake The Dead*, which enters like a seditious take on Alice Cooper's *Elected* and exits via a series of swirling passages that reference burning candles, spectral weddings and the hidden veil between worlds. The idea, in the band's own words, is "to give the fans a fucking killer song if they need one for a funeral".

Western Promise is suffused with the same urgent drama. A baleful love song with a sad-sounding trumpet break and a great organ solo, it's a charged hymn to wanderlust and togetherness in the face of tempest and storm. 'Fortune favours the brave as we seize the day,' Vanian asserts, in one of his most measured vocal performances. The moonlit *Roderick* feels like a lost blood brother of 1980's *Curtain Call*, a semi-symphonic piece with piano, brass, Latin choir and allusions to Edgar Allan Poe.

Mostly, though, 'Darkadelic' is fairly breathless stuff. Sensible is both savage and articulate on guitar, be it the Stooges-like blowout *Follow Me*, a merciless takedown of celebrity culture, or the ferocious *Leader Of The Gang*, a thinly veiled account of Gary Glitter's fall from grace.

All told, 'Darkadelic' is a vital and reassuringly pugnacious return. *Rob Hughes*



JILL FURMANOVSKY

PINK FLOYD *The Dark Side Of The Moon 50th Anniversary Edition Box Set*

Ticking away the moments...

With over 50 million copies sold worldwide, 'The Dark Side Of The Moon' was one of the first albums to join the select club of Records More Famous Than The People Who Made Them, and like The Who's 'Tommy' and Fleetwood Mac's 'Rumours', it's a record that crystallised the group's image for ever, despite being not entirely representative of their past. Before 'The Dark Side Of The Moon', Pink Floyd (who also once sported a now-forgotten "The") had been pop, psychedelic, and experimental. After it they were a hugely popular yet strangely faceless stadium mega band and everything they did, from 'Wish You Were Here' to 'The Wall', was measured against it.

Why was it so big? Perhaps because the lessons learned from previous experiments — tape loops, sound effects and spoken word — were combined with a new focus: Roger Waters (and Rick Wright's) downbeat, sceptical lyrics ('Quiet desperation is the English way'), set to concise, commercial melodies that suited David Gilmour's blue-eyed soul voice and direct guitar playing. With its superb production and perfectly smooth segueways, 'The Dark Side Of The Moon' was Abbey Road for the seventies rock generation: an album that could be used to test your hi-fi, soundtrack a dinner party, make you think, and roll a spliff on. Its themes were vague enough to be universal — war is bad, wealth is bad, we're all going to die — but the vagueness was undercut by Roger Waters' sharpness and intelligence. Add to that Clare Torry's astonishing first-take impro vocals on *The Great Gig In The Sky* and a liberal use of smokey saxophone, and 'The Dark Side Of The Moon' was transformed into something seemingly very far from *Several Species Of Small Furry Animals Gathered Together In A Cave And Grooving With A Pict*. Pink Floyd had created something new: very loud but also somehow very sensitive stadium rock. They would attempt the formula again with subsequent records but as Roger Waters began to both dominate the group and to write increasingly personal songs, they never quite could.

This new 50th Anniversary edition pulls out its big guns for the marketplace, comprising in its various forms CD, gatefold vinyl, Blu-rays with Atmos and high-res stereo and DTS 5.1, vinyl singles, a photo book and additional material in the form of Live At Wembley Empire Pool, London, 1974, which is kind of self-describing. It's still an amazing, imposing album, and rightly remains a cornerstone of rock. *David Quantick*

CARTER USM

30 Something box set Jim Bob and Fruitbat's finest hour. Wot, no T-shirt?

This deep into the world-wearily complacent 'what-the-fuck-next?' 21st century, it's hard to believe that Carter The Unstoppable Sex Machine weren't just a figment; a desperate ex-punk's wishful-thinking cheese dream, a Beastie Boys/Angus Young-inspired antidote to indie jangling and an ecstasy-encumbered pop zeitgeist reduced to giving flares another go. Chipmunk-faced cycling enthusiast Leslie 'Fruitbat' Carter thrashed-out irresistible ear-worm riffs to a DAT backing track as outwardly shy, inwardly seething human fringe James Robert Morrison wrapped righteous anger in punchy puns. Jim Bob was furious about everything and wrote emotively about slum landlords, rubbish radio, child abuse, bullying in the armed forces, alcoholism, racism, muggers, fat bastards, the prospect of shadows on his lungs and eventually, almost inevitably, aeroplane food. If you never went along to a Carter show, you couldn't possibly

Live in Oxford 1989, two years before '30 Something'

GREG NEATE

imagine just how good this unlikely pair of Sarf London chancers actually were. Carter gigs were like Clash gigs, football terraces supplanted into moshpits where uniformly social conscienced ne'er-do-wells in signed T-shirts bellowed along with every word and the sky turned black with stage-divers. Carter had a No.1 album and a dozen hit singles. Not indie chartbusters — proper ones. At their peak they even impossibly dreamed of a Christmas No.1, but that was in 1992.

In '91, they released their masterpiece, '30 Something', which (now quadrupled in size to accommodate BBCs, lives, B-sides and the 'In Bed With Carter' performance doco DVD) encompasses and distills all of the above into your one-stop shop for all things Carter.

Sweet Jesus, I'd forgotten how good they were…

. **Ian Fortnum**

SLADE

Reissues: Nobody's Fools / The Amazing Kamikaze Syndrome

Deluxe CD and coloured vinyl.

It may have marked the beginning of the end of Slade's UK chart dominance — the album's third single only reached number 53, breaking a run of 17 consecutive hits — but 'Nobody's Fools' is considered by many, including Noddy Holder, to be their most cohesive studio album.

The result of having relocated to New York in the spring of 1975, it's far funkier than its predecessors, Holder and Lea tapping into a can-do culture on sweltering funk work-out *Do The Dirty* — as soupy as Manhattan in a heatwave — the Motown-inspired title track, and joyous disco groove *L.A. Jinx*. All of which must have raised eyebrows on the rainswept terraces back 'ome on its release in April 1976.

Ironically it wasn't until 1983's 'The Amazing Kamikaze Syndrome' that the band finally got their US breakthrough, notching Top 40 US hits with the John Punter-produced *My Oh My* and *Run Runaway*. If the rest of the album sounds as dated as mullets and shoulder-pads, the songwriting is as strong as ever, *High And Dry* and *Cheap 'N' Nasty Luv* both drive-time staples in a parallel universe. With six additional tracks on the CD including a swing version of *My Oh My* and killer B-side *Can't Tame A Hurricane*, this is pretty much essential for any self-respecting Sladeologist. **Paul Moody**

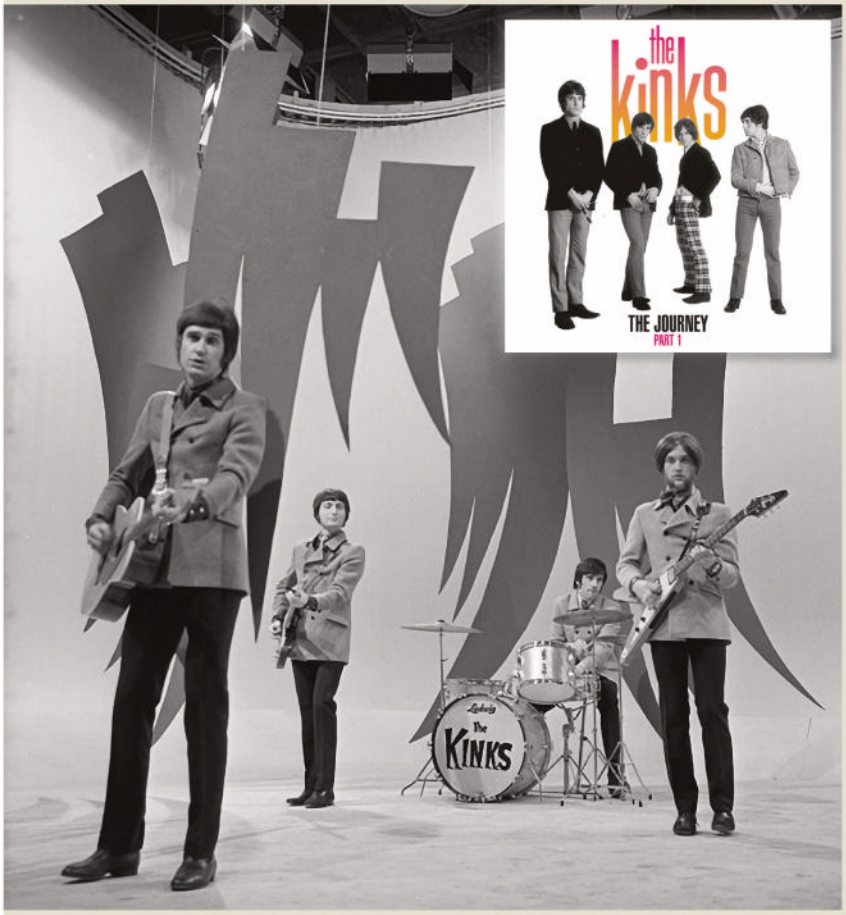
YARDBIRDS

Live In Sweden '67

This short, sharp, 27-minute, eight-track snapshot, recorded live in Stockholm for Sweden's national broadcaster SRT as the band prepared to set out on their Scandinavian tour of April '67, captures the group's ultimate four-piece line-up — Jimmy Page (guitar), Keith Relf (vocals), Chris Dreja (bass) and Jim McCarty (drums) — on vintage form, if slightly unsure of exactly where they were going.

Opening with crowd-pleasing hit *Shapes Of Things*, they then cover Dylan's *Most Likely You'll Go Your Way*, and showcase their latest Mickie Most-produced *Little Games* single (not a good fit for a band already well on their way to defining hard rock), before Page finally shows his teeth and hints at his future with a lengthy assault on Bo Diddley's *I'm A Man*.

Newly available on vinyl, CD and streaming, this former bootleg staple isn't exactly essential, but you'll be way better off with it than you will without it. **Ian Fortnum**



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THE KINKS *The Journey Part 1*

Episode one of The Kinks' story, in four deep-diving segments.

More magical mystery tour than supersonic rocket ship ride, this 'Journey'. To mark their 60th anniversary, The Kinks take a trip around their back catalogue that's very much in the spirit of Terry and Julie's meandering tour of London. A roundabout sort of wander, led by feeling and skipping some of the more celebrated sights in order to marvel at the back roads and hidden beauty spots missed by the charging throngs.

Arranged into four themed sections to reflect the "trials and tribulations" of their story — collections of songs about young manhood, success, regret and fresh starts — these 36 tracks begin at the proto-punk riffs and R&B grooves of *You Really Got Me* and *All Day And All Of The Night*, which could have done with a beefier, punchier remaster for the occasion. But from 1964 it takes numerous diversions into under-appreciated singles, album tracks and B-sides from the next 11 years up to 1975's *Schoolboys In Disgrace*. The emotion-led curation of the catalogue naturally elevates meaningful minor tracks above the more obvious hits: the randy roustabout of 1966's *Dandy*, *Drivin'*'s driving rock flip-side *Mindless Child Of Motherhood*, and forgotten singles like the baroque-pop *Wonderboy* and T.Rex-gone-calypso sci-fi utopia *Supersonic Rocket Ship*. *We get Tired Of Waiting For You*, *Days* and *Waterloo Sunset* here, but the likes of *Lola*, *Sunny Afternoon* and *Apeman* are presumably kept back for future releases.

The narrative format is quintessentially Kinksian, but the effect is to somewhat explode the traditional idea of the mod movers who swiftly transformed into whimsical storytellers of village green British pop. This Kinks is a far more exploratory proposition, finding sonic links with Simon & Garfunkel (*So Long*), Dylan (*Where Have All The Good Times Gone?*, *Death Of A Clown*), The Byrds (*Tired Of Waiting*)… and even, come the radio-rock mid-70s era, Steve Miller or the Eagles. 1972's sublime *Celluloid Heroes* — where Ray Davies takes a romantic stroll around a different sort of sunset, honouring the lost stars on Hollywood's Walk Of Fame — even exhibits a canny connection to 'Hunky Dory' and 'Ziggy', such was Davies's restless stylistic questing. And while there's plenty of fluff, it's heartening to see the spotlight fall on tracks such as 1970's lovely psych rock Americana homage *Strangers*, or the Wings-y *Shangri-La*.

A welcome reminder, then, that while The Kinks were undoubtedly not like anybody else, they didn't exist in a world entirely their own. *Mark Beaumont*

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Our Lifetime Achievement Award doesn't indicate that it's all over for the recipient — this year's winner is certainly of an age where we trust there'll be plenty of work still to come. Yet Dr. Martin E. Gosnell already has more successful loudspeaker designs than many a retired designer. And his resumé is a busy one.

He built his first pair of loudspeakers at the age of 17 in his father's garage (using 10-inch Etone woofers, Audax bass-mids and a classic 25mm Philips tweeter, with a soon-modified three-way Jaycar crossover, he remembers). At 21 he started making active speakers and — after having a dream about designing speakers professionally — he started his own brand, DM Loudspeakers.

An intense and varied career, meanwhile, saw him as a telecommunications technician, then at CSIRO designing scientific research equipment (world-first laser combustion single particle nano-mass analyzer, anyone?), taking a degree in electrical engineering (first-class honours majoring in control, instrumentation and AI vision), and winning an IEE (UK) engineering prize.

Dr Gosnell has made a habit of keeping multiple careers ticking over. He was working as a contract design engineer — while also selling his own brand of speakers — when he got a call from Ken Dwyer of Audio Products.

"Ken had recently acquired Richter from Ralph Waters," Dr Gosnell once told us when we interviewed him for a Richter history. "Ken was a real gentleman and I was impressed with his vision and enthusiasm, and before too long I was having an interview with him and a friend of his at the Novotel bar in Sydney. His friend turned out to be none other than Howard Heiber, former owner and president of API Canada, who was there to grill the socks off me on speaker technology, design and engineering. Well, I immediately ordered a double scotch."

Dwyer left the two tech-heads to chat away, and when he returned several hours later, "Howard and I were engrossed in a conversation like two old enthusiasts. Howard gave Ken both thumbs up — and I was hired as Richter's new contract designer."

Dr Gosnell has been designing for Richter ever since, continuing through changes of ownership to John Fahey then John Cornell, while Richter went from strength to strength, winning an impressive collection of product awards (including our own). There were Predator and Sovereign ranges, the 'Precious Metals' range that received a huge reception through Harvey Norman, and the trifecta-award-winning Richter Thor Mark IV sub.

In 2016 Brian Rodgers bought Richter, having cut his teeth at Southern Cross Electronics before joining first Grundig Australia and then Bush Australia; Dr Gosnell describes their subsequent partnership as "a match made in heaven... Richter now has a formidable team of engineering, creativity, experience and passion." The resulting Richter Series 6 has every bit scaled the heights of the company's most legendary speakers — "by far the best ever, and better-than-ever value for money," says Dr Gosnell. And it is now topped by the latest creation, the Excalibur S6 [pictured], which launches in a special edition black.

"Excalibur was one of those projects that just worked from conception to finality," he says, even though his time on the project was challenged by those 'other jobs': developing spectral microscope systems for university groups and publishing multiple white papers on using spectral microscopy to characterise cellular metabolism. He's also worked as a senior machine learning analyst at Emotiv systems, developing algorithms to classify EEG brain signals, and was a senior bioinformatics analyst for a nanoscale biophotonics centre of excellence. No wonder he says it has been an intensely busy period, and he greatly credits his wife Rachelle with getting him through it all.

Clearly, however, he wouldn't change a thing. He asks us to thank everyone he has ever worked with, for their contribution to his fascinating and rewarding life.

"I love technology and science," he tell us, "but there's no feeling like making a product and seeing the joy on someone's face when they hear it. I feel blessed to have worked in this industry — the longest thread in my multifaceted career. It's been tough in recent years, but at Richter we have more determination than ever to keep this wonderful industry, as the song goes, 'alive and kicking'."

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